Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Hi-Strength Spray Adhesive 90 (aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/09/2005
Supercedes Date: 03/25/2005

Document Group: 16-4935-9

Product Use:
Intended Use: aerosol adhesive
Specific Use: hi-strength aerosol adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
DIMETHYL ETHER	115-10-6	35 - 45
METHYL ACETATE	79-20-9	25 - 35
NONVOLATILE COMPONENTS - N.J. TRADE SECRET REGISTRY NO. 04499600-6448P	Trade Secret	10 - 20
CYCLOHEXANE	110-82-7	7 - 13
1,1-DIFLUOROETHANE	75-37-6	1 - 5
PENTANE	109-66-0	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: clear, sweet fruity odor
General Physical Form: Gas
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
May be absorbed through skin and cause target organ effects.

Prolonged or repeated exposure may cause:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:
Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Intentional concentration and inhalation may be harmful or fatal.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure, above recommended guidelines, may cause:
Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney Effects: Signs/symptoms may include reduced or absent urine production, increased serum creatinine, lower back pain, increased protein in urine, and increased blood urea nitrogen (BUN).

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	-42.00 °F [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. If the cylinder can't be closed, place in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors. Dispose of collected material as soon as possible. Discharge the resulting residue containing solution to a municipal or industrial wastewater treatment facility.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid prolonged or repeated skin contact. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact. Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Gloves not normally required. Avoid skin contact. Avoid prolonged or repeated skin contact.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Consult the current 3M Respirator Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
1,1-DIFLUOROETHANE	AIHA	TWA	1000 ppm	
1,1-DIFLUOROETHANE	CMRG	TWA	1000 ppm	
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
DIMETHYL ETHER	AIHA	TWA	1000 ppm	
DIMETHYL ETHER	CMRG	TWA	1000 ppm	
METHYL ACETATE	ACGIH	TWA	200 ppm	
METHYL ACETATE	ACGIH	STEL	250 ppm	
METHYL ACETATE	OSHA	TWA	200 ppm	Table Z-1A
METHYL ACETATE	OSHA	STEL	250 ppm	Table Z-1A
PENTANE	ACGIH	TWA	600 ppm	
PENTANE	OSHA	TWA, Vacated	600 ppm	
PENTANE	OSHA	STEL, Vacated	750 ppm	
PENTANE	OSHA	TWA	1000 ppm	Table Z-1

VAC Vacated PEL:Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
General Physical Form:	Gas
Autoignition temperature	*No Data Available*
Flash Point	-42.00 °F [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
Boiling point	*Not Applicable*
Vapor Density	2.97 [*Ref Std:* AIR=1]
Specific Gravity	0.726 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*Not Applicable*
Solubility in Water	Nil
Evaporation rate	1.90 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	<=.4 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	54 %
Percent volatile	<=75 % weight
VOC Less H2O & Exempt Solvents	533 g/l
Viscosity	*Not Applicable*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. The facility should be equipped to handle gaseous waste.
RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
62-4942-0926-5, 62-4942-4925-3, 62-4942-4928-7, 62-4942-4930-3, 62-4942-4935-2, 62-4942-4938-6, CS-0406-7111-0

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
CYCLOHEXANE	110-82-7	7 - 13

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	C.A.S. No	Regulation	Status
PENTANE	109-66-0	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
CYCLOHEXANE	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
METHYL ACETATE	79-20-9	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 4 **Reactivity:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 9: Property description for optional properties was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M MSDSs are available at www.3M.com

Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Weatherstrip Adhesive - Black, P.N. 08011
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 07/26/2005
Supercedes Date: 01/09/2004

Document Group: 10-2974-3

Product Use:
Specific Use: Trim Adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
MIXED HEXANE ISOMERS	Mixture	10 - 30
HEXANE	110-54-3	10 - 30
CARBON DIOXIDE	124-38-9	7 - 13
MIXED HEPTANES	Mixture	5 - 10
MEDIUM ALIPHATIC SOLVENT NAPHTHA	64742-88-7	5 - 10
NAPHTHA (PETROLEUM), SOLVENT-REFINED LIGHT	64741-84-0	5 - 10
TALC	14807-96-6	5 - 10
POLYISOPRENE	9003-31-0	3 - 7
TOLUENE	108-88-3	3 - 7
PHENOL, POLYMER WITH FORMALDEHYDE, MAGNESIUM OXIDE COMPLEX	68611-24-5	1 - 5
NAPHTHA, LIGHT STEAM-CRACKED AROM., PIPERYLENE CONC., POLYMD.	68478-07-9	1 - 5
STYRENE-BUTADIENE POLYMER	9003-55-8	1 - 5
CALCIUM ZINC RESINATE	68334-35-0	1 - 5
FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, MAGNESIUM OXIDE COMPLEX	68037-42-3	1 - 5
CYCLOHEXANE	110-82-7	< 2
ETHYL ALCOHOL	64-17-5	0.1 - 1
CARBON BLACK	1333-86-4	< 0.3
ETHYLBENZENE	100-41-4	<= 0.1
BENZENE	71-43-2	<= 0.00199464

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Medium paste
Odor, Color, Grade: black, mild odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

May be absorbed through skin and cause target organ effects.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Central Neuropathy: Signs/symptoms may include irritability, memory impairment, personality changes, sleep disorders, and decreased ability to concentrate.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Ingredient	C.A.S. No.	Class Description	Regulation
BENZENE	71-43-2	Group 1	International Agency for Research on Cancer
BENZENE	71-43-2	Known human carcinogen	National Toxicology Program Carcinogens
BENZENE	71-43-2	Cancer hazard	OSHA Carcinogens
CARBON BLACK	1333-86-4	Group 2B	International Agency for Research on Cancer
ETHYL ALCOHOL	64-17-5	Group 1	International Agency for Research on Cancer
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	-6.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	1.00 % volume
Flammable Limits - UEL	7.00 % volume
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed

containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid breathing of vapors created during cure cycle. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Do not use in a confined area or areas with little or no air movement. Provide ventilation adequate to maintain dust concentration below minimum explosive concentrations.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Nitrile Rubber, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of vapors created during cure cycle.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters.
Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
BENZENE	ACGIH	TWA	0.5 ppm	Skin Notation*; Table A1
BENZENE	ACGIH	STEL	2.5 ppm	Skin Notation*; Table A1
BENZENE	OSHA	TWA	1 ppm	Standard Appendix
BENZENE	OSHA	STEL	5 ppm	Standard Appendix
CARBON BLACK	ACGIH	TWA	3.5 mg/m3	Table A4
CARBON BLACK	CMRG	TWA	0.5 mg/m3	
CARBON BLACK	OSHA	TWA	3.5 mg/m3	Table Z-1
CARBON DIOXIDE	ACGIH	TWA	5000 ppm	
CARBON DIOXIDE	ACGIH	STEL	30000 ppm	
CARBON DIOXIDE	OSHA	TWA	10000 ppm	Table Z-1A
CARBON DIOXIDE	OSHA	STEL	30000 ppm	Table Z-1A
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
ETHYL ALCOHOL	ACGIH	TWA	1000 ppm	Table A4
ETHYL ALCOHOL	OSHA	TWA	1000 ppm	Table Z-1
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
HEXANE	ACGIH	TWA	50 ppm	Skin Notation*
HEXANE	OSHA	TWA, Vacated	50 ppm	Table Z-1A
HEXANE	OSHA	TWA	500 ppm	Table Z-1A
MEDIUM ALIPHATIC SOLVENT NAPHTHA	CMRG	TWA	100 ppm	
OIL MIST, MINERAL	ACGIH	TWA, as mist	5 mg/m3	
OIL MIST, MINERAL	ACGIH	STEL, as mist	10 mg/m3	
OIL MIST, MINERAL	OSHA	TWA, as mist	5 mg/m3	Table Z-1
TALC	ACGIH	TWA, respirable	2 mg/m3	Table A4
TALC	CMRG	TWA, as respirable dust	0.5 mg/m3	
TALC	OSHA	TWA, respirable	2 mg/m3	Table Z-1A
TOLUENE	ACGIH	TWA	50 ppm	Skin Notation*; Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*

TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL:Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Medium paste
Odor, Color, Grade:	black, mild odor
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	-6.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	1.00 % volume
Flammable Limits - UEL	7.00 % volume
Boiling point	148.00 - 189.00 ºF
Vapor Density	3.00 [*Ref Std:* AIR=1]
Vapor Pressure	120.0000 mmHg [*Details:* CONDITIONS: @ 68F]
Specific Gravity	0.820 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*No Data Available*
Solubility in Water	Slight (less than 10%)
Evaporation rate	2.50 [*Ref Std:* ETHER=1]
Volatile Organic Compounds	4.14 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
Percent volatile	Approximately 65 % weight
VOC Less H2O & Exempt Solvents	497 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Viscosity	7500.0 - 18000.0 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.
Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D018 (Benzene)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
60-9800-2703-5, 62-4799-2609-9

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
TOLUENE	108-88-3	3 - 7
CALCIUM ZINC RESINATE (ZINC COMPOUNDS)	68334-35-0	1 - 5
HEXANE	110-54-3	10 - 30
CYCLOHEXANE	110-82-7	< 2
ETHYLBENZENE	100-41-4	<= 0.1

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	C.A.S. No	Regulation	Status
HEXANE	110-54-3	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
CYCLOHEXANE	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
BENZENE	71-43-2	*Male reproductive toxin
BENZENE	71-43-2	**Carcinogen
BENZENE	71-43-2	*Developmental Toxin
ETHYLBENZENE	100-41-4	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.
** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 3 **Reactivity:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 **Flammability:** 4 **Reactivity:** 0 **Protection:** A

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Reason for Reissue: The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

Revision Changes:
Section 16: NFPA hazard classification heading was modified.
Section 16: HMIS hazard classification heading was modified.
Section 3: Carcinogenicity heading was modified.
Section 3: Other potential health effects heading was modified.
Copyright was modified.
Section 8: Exposure guidelines data source legend was modified.
Section 3: Immediate physical hazard(s) was modified.
Section 3: Potential effects from skin contact information was modified.
Section 3: Potential effects from inhalation information was modified.
Section 3: Potential effects from ingestion information was modified.
Section 5: Unusual fire and explosion hazard information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 8: Respiratory protection information was modified.
Section 15: 311/312 hazard categories heading was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 4: First aid for ingestion (swallowing) - decontamination - was modified.
Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.
Section 10: Hazardous polymerization heading was modified.
Section 3: Carcinogenicity phrase was modified.
Section 3: Immediate other hazard(s) was modified.

Section 2: Ingredient table was modified.
Section 15: TSCA section 12[b] text was modified.
Section 3: Other health effects information was modified.
Section 16: HMIS explanation was modified.
Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Section 15: EPCRA 313 information was modified.
Section 15: California proposition 65 ingredient information was modified.
Section 3: Carcinogenicity table was modified.
Section 15: EPCRA 313 text was modified.
Section 15: California proposition 65 heading was modified.
Section 15: California proposition 65 reproductive harm warning was modified.
Section 15: California proposition 65 cancer warning was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 8: Exposure guidelines legend was modified.
Section 8: Exposure guideline note was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 16: Reason for reissue heading was modified.
Section 12: Ecotoxicological phrase was modified.
Section 12: Chemical Fate phrase was modified.
Section 2: Ingredient phrase was added.
Section 3: Other health effects information (reproductive hazards) was added.
Section 3: Immediate skin hazard(s) was deleted.

3M MSDSs are available at www.3M.com

Material Safety Data Sheet

Acetylene

Section 1. Chemical product and company identification

Product name : Acetylene

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry.

Synonym : acetylen; acetylene ; ethine; ethyne; narcylen

MSDS # : 001001

Date of Preparation/Revision : **5/11/2011.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas.

Emergency overview : WARNING!

FLAMMABLE GAS.
MAY CAUSE FLASH FIRE.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTENTS UNDER PRESSURE.

Keep away from heat, sparks and flame. Do not puncture or incinerate container. May cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container closed.

Contact with rapidly expanding gases can cause frostbite.

Target organs : May cause damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).

Routes of entry : Inhalation

Potential acute health effects

Eyes : Contact with rapidly expanding gas may cause burns or frostbite.

Skin : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Acts as a simple asphyxiant.

Ingestion : Ingestion is not a normal route of exposure for gases

Potential chronic health effects

Chronic effects : May cause target organ damage, based on animal data.

Target organs : May cause damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Acetylene	74-86-2	100	**NIOSH REL (United States, 6/2009).** CEIL: 2662 mg/m³ CEIL: 2500 ppm

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Flammable.

Auto-ignition temperature : 305°C (581°F)

Flash point : Closed cup: -18.15°C (-0.7°F).

Flammable limits : Lower: 2.5% Upper: 100%

Products of combustion : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Fire hazards in the presence of various substances : Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and oxidizing materials.

Fire-fighting media and instructions : In case of fire, use water spray (fog), foam or dry chemical.

In case of fire, allow gas to burn if flow cannot be shut off immediately. Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. Flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : Use only with adequate ventilation. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Keep container closed. Keep away from heat, sparks and flame. To avoid fire, eliminate ignition sources. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Storage : Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Segregate from oxidizing materials. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

Ethyne

NIOSH REL (United States, 6/2009).
CEIL: 2662 mg/m³
CEIL: 2500 ppm

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 26.04 g/mole

Molecular formula : C2-H2

Melting/freezing point : Sublimation temperature: -81.8°C (-115.2 to °F)

Critical temperature : 35.3°C (95.5°F)

Vapor pressure : 635 (psig)

Vapor density : 0.907 (Air = 1)

Specific Volume (ft ^{3}/lb) : 14.7058

Gas Density (lb/ft ^{3}) : 0.0691 (-80°C / -112 to °F)

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Extremely reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Chronic effects on humans : May cause damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Products of degradation : Products of degradation: carbon oxides (CO, CO_2) and water.

Environmental fate : Not available.

Environmental hazards : This product shows a low bioaccumulation potential.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: Forbidden. **Cargo aircraft** Quantity limitation: 15 kg

Acetylene						
TDG Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0 **Passenger Carrying Ship Index** 75 **Passenger Carrying Road or Rail Index** Forbidden **Special provisions** 38, 42
Mexico Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).		-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 15. Regulatory information

United States

U.S. Federal regulations :

TSCA 8(a) IUR: Partial exemption
United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ethyne
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ethyne: Fire hazard, reactive, Sudden release of pressure, Immediate (acute) health hazard

Clean Air Act (CAA) 112 accidental release prevention - Flammable Substances: Acetylene

Clean Air Act (CAA) 112 regulated flammable substances: Ethyne

State regulations :

Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.

Rhode Island Hazardous Substances: This material is not listed.

Canada

WHMIS (Canada) : Class A: Compressed gas.
Class B-1: Flammable gas.
Class F: Dangerously reactive material.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

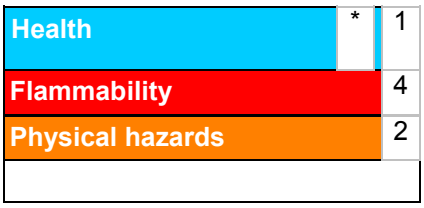
United States

Label requirements : FLAMMABLE GAS.
MAY CAUSE FLASH FIRE.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTENTS UNDER PRESSURE.

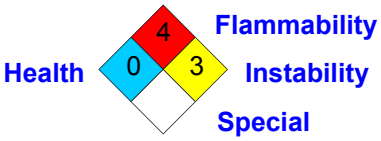
Canada

Label requirements : Class A: Compressed gas.
Class B-1: Flammable gas.
Class F: Dangerously reactive material.

Hazardous Material Information System (U.S.A.) :



National Fire Protection Association (U.S.A.) :



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Supercedes Date 07/25/2008 **Issuing Date** 06/28/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AEROLEX PLUS AEROSOL
Product Code 5438
Recommended use Lubricant
Chemical nature Alcoholic solution

Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Emergency Telephone Number
CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Extremely flammable
May be harmful if inhaled
May cause skin irritation
Causes eye irritation
Harmful or fatal if swallowed
Contents under pressure

Color dark gray **Physical State** Liquid **Odor** Alcoholic

Potential Health Effects

Principle Route of Exposure Inhalation, Skin contact, Eye contact.
Primary Routes of Entry Inhalation, Skin Absorption.
Acute Effects
Eyes Causes eye irritation.
Skin May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Inhalation May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Causes headache, drowsiness or other effects to the central nervous system. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.
Chronic Toxicity Ingestion may cause lowering of blood pressure. Liver and kidney injuries may occur.
Target Organ Effects Respiratory system, Central nervous system, Liver, Kidney, Heart, Blood, Skin, Eyes, Bone, Ears.
Aggravated Medical Conditions Respiratory disorders, Skin disorders, Liver disorders, Kidney disorders, Blood disorders, Neurological disorders, Heart disease.
Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Isopropyl alcohol	67-63-0
Butane	106-97-8
Propane	74-98-6
Molybdenum disulfide	1317-33-5
Ethylcellulose	9004-57-3
Urea	57-13-6
Petroleum naphtha, light aromatic	64742-95-6
Pseudocumene	95-63-6
1,3,5-Trimethylbenzene	108-67-8

4. FIRST AID MEASURES

General Advice Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.
Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to physician Aspiration hazard if swallowed - can enter lungs and cause damage.

5. FIRE-FIGHTING MEASURES

Flash Point 47 °F / 8 °C **Method** Seta closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Mixture. **Upper** 12.7 **Lower** 1.8
Suitable Extinguishing Media
Water spray. Carbon dioxide (CO2). Foam. Alcohol-resistant foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Flame extension: >36 inches / >91.4 cm and Burnback: 6 inches / 15 cm.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Aerosol Level (NFPA 30B) - 3
NFPA **Health** 2 **Flammability** 4 **Instability** 0

HMIS **Health** 2 **Flammability** 4 **Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Keep away from open flames, hot surfaces and sources of ignition. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing.

Storage Keep away from heat and sources of ignition.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 980 mg/m^3	IDLH: 2000 ppm STEL 500 ppm STEL 1225 mg/m^3 TWA: 400 ppm TWA: 980 mg/m^3
Butane	TWA: 1000 ppm	No data available	TWA: 800 ppm TWA: 1900 mg/m^3
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m^3
Molybdenum disulfide	TWA: 10 mg/m^3 TWA: 3 mg/m^3	TWA: 15 mg/m^3	IDLH: 5000 mg/m^3
Ethylcellulose	No data available	No data available	No data available
Urea	No data available	No data available	No data available
Petroleum naphtha, light aromatic	No data available	No data available	No data available
Pseudocumene	No data available	No data available	TWA: 25 ppm TWA: 125 mg/m^3
1,3,5-Trimethylbenzene	No data available	No data available	TWA: 25 ppm TWA: 125 mg/m^3

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Slightly Viscous
Color	dark gray	**Odor**	Alcoholic
Appearance	Opaque	**pH**	Not applicable
Specific Gravity	0.817	**Evaporation Rate**	52.2 (Butyl acetate=1)
Percent Volatile (Volume)	100	**VOC Content (%)**	100
VOC Content (g/L)	817	**Vapor Pressure**	1302 mmHg @ 70°F
Vapor Density	1.9 (Air = 1.0)	**Solubility**	Dispersible
Boiling Point/Range	180 °F / 82 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks

Incompatible Products Strong oxidizing agents, Acids, Bases, Aldehydes, Ketones, Halogenated hydrocarbon.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Isopropyl alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h	no data available	no data available
Butane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Propane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available

Molybdenum disulfide	no data available	no data available	> 2820 mg/m3 (Rat) 4 h	no data available	no data available
Ethylcellulose	> 5 g/kg (Rat)	> 5 g/kg (Rabbit)	no data available	no data available	no data available
Urea	8471 mg/kg (Rat)	no data available	no data available	no data available	no data available
Petroleum naphtha, light aromatic	8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	3400 ppm (Rat) 4 h > 5.2 mg/L (Rat) 4 h	no data available	no data available
Pseudocumene	3400 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18 g/m3 (Rat) 4 h	no data available	no data available
1,3,5-Trimethylbenzene	5000 mg/kg (Rat)	no data available	24 g/m3 (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Isopropyl alcohol	no data available	no data available	no data available	no data available	eyes, respiratory system, skin, liver, kidney, CNS
Butane	no data available	no data available	no data available	no data available	CNS
Propane	no data available	no data available	no data available	no data available	CNS
Molybdenum disulfide	no data available	no data available	no data available	no data available	respiratory system, kidneys, eyes, blood, bones, joints
Ethylcellulose	no data available	no data available	no data available	no data available	no data available
Urea	no data available	no data available	no data available	no data available	no data available
Petroleum naphtha, light aromatic	no data available	no data available	no data available	no data available	CNS
Pseudocumene	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin, blood, ears, heart
1,3,5-Trimethylbenzene	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin, blood, ears, heart

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Isopropyl alcohol	not applicable	not applicable	not applicable	not applicable	not applicable
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
Molybdenum disulfide	not applicable	not applicable	not applicable	not applicable	not applicable
Ethylcellulose	not applicable	not applicable	not applicable	not applicable	not applicable
Urea	not applicable	not applicable	not applicable	not applicable	not applicable
Petroleum naphtha, light aromatic	not applicable	not applicable	not applicable	not applicable	not applicable
Pseudocumene	not applicable	not applicable	not applicable	not applicable	not applicable
1,3,5-Trimethylbenzene	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Isopropyl alcohol	EC50 > 1000 mg/L Desmodesmus subspicatus 72 h EC50 > 1000 mg/L Desmodesmus subspicatus 96 h	LC50 11130 mg/L Pimephales promelas 96 h LC50 9640 mg/L Pimephales promelas 96 h LC50 > 1400000 µg/L Lepomis macrochirus 96 h	EC50 = 35390 mg/L 5 min	EC50 13299 mg/L 48 h	0.05
Butane	no data available	no data available	no data available	no data available	2.89
Propane	no data available	no data available	no data available	no data available	2.3
Molybdenum disulfide	no data available	no data available	no data available	no data available	N/A
Ethylcellulose	no data available	no data available	no data available	no data available	N/A
Urea	no data available	LC50 16200-18300 mg/L Poecilia reticulata 96 h	EC50 = 23914 mg/L 5 min	EC50 3910 mg/L 48 h EC50> 10000 mg/L 24 h	-1.59
Petroleum naphtha, light aromatic	no data available	LC50 9.22 mg/L Oncorhynchus mykiss 96 h	no data available	EC50 6.14 mg/L 48 h	N/A
Pseudocumene	no data available	LC50 7.19-8.28 mg/L Pimephales promelas 96 h	no data available	EC50 6.14 mg/L 48 h	3.63
1,3,5-Trimethylbenzene	no data available	LC50 3.48 mg/L Pimephales promelas 96 h	no data available	EC50 50 mg/L 24 h	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Contents under pressure. Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Consumer commodity
Hazard Class ORM-D
Description Consumer commodity ,ORM-D,

TDG

Proper shipping name Aerosols
Hazard Class 2.1
UN-No UN1950
Description AEROSOLS,2.1,UN1950 LTD. QTY.

ICAO

UN-No UN1950
Proper Shipping Name Aerosols

Hazard Class	2.1
Shipping Description	Aerosols,UN1950 2.1 LTD. QTY.

IATA

UN-No	UN1950
Proper Shipping Name	Aerosols, flammable
Hazard Class	2.1
ERG Code	10L
Shipping Description	UN1950,Aerosols, flammable,2.1 LTD. QTY.

IMDG/IMO

Proper Shipping Name	Aerosols
Hazard Class	2
UN-No	UN1950
EmS No.	F-D, S-U
Shipping Description	UN1950, Aerosols,2.1 LTD QTY.

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Isopropyl alcohol	67-63-0	40-70	1.0
Pseudocumene	95-63-6	1-5	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Isopropyl alcohol	Not applicable	Not applicable
Butane	Not applicable	Not applicable
Propane	Not applicable	Not applicable
Molybdenum disulfide	Not applicable	Not applicable
Ethylcellulose	Not applicable	Not applicable
Urea	Not applicable	Not applicable
Petroleum naphtha, light aromatic	Not applicable	Not applicable
Pseudocumene	Not applicable	Not applicable
1,3,5-Trimethylbenzene	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

A Compressed gases, B5 Flammable aerosol, D2B Toxic materials.

16. OTHER INFORMATION

Prepared By	Dan Hollas
Supercedes Date	07/25/2008
Issuing Date	06/28/2011
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL DELVAC EXTENDED LIFE COOLANT/ANTIFREEZE
Product Description: Glycol
Product Code: 840421-00, 97AA96
Intended Use: Antifreeze/coolant

COMPANY IDENTIFICATION

Supplier: **EXXON MOBIL CORPORATION**
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA

24 Hour Health Emergency	609-737-4411
Transportation Emergency Phone	800-424-9300
ExxonMobil Transportation No.	281-834-3296
MSDS Requests	713-613-3661
Product Technical Information	800-662-4525, 800-947-9147
MSDS Internet Address	http://www.exxon.com, http://www.mobil.com

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
DIETHYLENE GLYCOL	111-46-6	1 - 5%
ETHYLENE GLYCOL	107-21-1	90 - 100%
INORGANIC SALTS AND ORGANIC ACID SALTS		1 - 5%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3 HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL HEALTH EFFECTS

May cause harm to the unborn child. Harmful or fatal if swallowed. May cause kidney failure and central nervous system effects if ingested. Prolonged exposure to elevated concentrations of mists or liquids may cause irritation to skin, eyes, and the respiratory tract Ingestion of diethylene glycol may result in nausea, vomiting, abdominal cramps, convulsions, edema of the lung, cardiopulmonary effects (metabolic acidosis), pneumonia and kidney failure which could result in death. The lethal dose for humans is about 50 ml. Harmful effects or illness can result from swallowing this material. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

Target Organs: Kidney | Reproductive system |

NFPA Hazard ID:	Health:	1	Flammability: 1	Reactivity:	0
HMIS Hazard ID:	Health:	2*	Flammability: 1	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention.

NOTE TO PHYSICIAN

This product contains ethylene glycol and/or diethylene glycol which, if ingested, are metabolized to toxic metabolites by the enzyme alcohol dehydrogenase, for which ethanol and 4-methylpyrazole {U.S. drug name Fomepizole, trade name Antizol} are antagonists. Administration of oral or intravenous ethanol or intravenous 4-methylpyrazole may arrest further metabolism of this material and thereby ameliorate the toxicity. Use of ethanol or 4-methylpyrazole does not affect toxic metabolites that are already present and is not a substitute for hemodialysis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water or Regular Foam

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to

protect personnel.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Aldehydes, Smoke, Fume, Oxides of carbon, Incomplete combustion products

FLAMMABILITY PROPERTIES

Flash Point [Method]: 119C (246F) [Setaflash Closed Cup]
Flammable Limits (Approximate volume % in air): LEL: 3.2 UEL: 15.3
Autoignition Temperature: >371°C (700°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Do not touch or walk through spilled material. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Consult an expert. Warn other shipping. Material will sink. Remove material, as much as possible, using mechanical equipment.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Remove debris in path of spill and remove contaminated debris from shoreline and water surface and dispose of according to local regulations. Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid breathing mists or vapors. Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			Note	Source
DIETHYLENE GLYCOL		TWA	10 mg/m3		N/A	AIHA WEEL
ETHYLENE GLYCOL	Aerosol.	Ceiling	100 mg/m3		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly affect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or

manufacturer data. The types of clothing to be considered for this material include:
If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS
See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION
Physical State: Liquid
Color: Red
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION
Relative Density (at 15 C): 1.136
Flash Point [Method]: 119C (246F) [Setaflash Closed Cup]
Flammable Limits (Approximate volume % in air): LEL: 3.2 UEL: 15.3
Autoignition Temperature: >371°C (700°F)
Boiling Point / Range: 170C (338F)
Vapor Density (Air = 1): 2.1 at 101 kPa [n-Butyl Acetate]
Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: 8.7
Log Pow (n-Octanol/Water Partition Coefficient): < 2
Solubility in Water: Complete
Viscosity: <15.6 cSt (15.6 mm2/sec) at 40 C
Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION
Freezing Point: -15°C (5°F)
Melting Point: N/D

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers, Strong Acids

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available.	Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.
Ingestion	
Toxicity (Human): LDLo 100 ml	Moderately toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

Contains:

DIETHYLENE GLYCOL (DEG): Orally, DEG is more toxic to humans than animal test data indicate. Probable lethal dose for an adult is about 50 ml (2 oz.), or 2 -3 swallows. Smaller amounts may cause kidney degeneration and failure. Benign urinary bladder tumors were observed in rats, no tumors were observed in mice.

ETHYLENE GLYCOL (EG): Repeated high oral exposure has caused kidney damage, neurological effects, degeneration of the liver and changes in blood chemistry and circulating blood cells in laboratory animals. Repeated overexposure has the potential to cause similar toxic effects in humans. EG causes developmental and reproductive effects at high dose levels in laboratory animals. The relevance of these findings to humans is uncertain.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Material -- Expected to remain in water or migrate through soil.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be readily biodegradable.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

BIOACCUMULATION POTENTIAL

Material -- Potential to bioaccumulate is low.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Even though this product is biodegradable, it must not be indiscriminately discarded into the environment. Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Ethylene Glycol)
Hazard Class & Division: 9
ID Number: 3082
Packing Group: III
Product RQ: 5376.34 lbs - ETHYLENE GLYCOL
ERG Number: 171

Label(s): 9
Transport Document Name: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Ethylene Glycol), 9, PG III, RQ

LAND (TDG) : Not Regulated for Land Transport

SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA) : Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA:

Chemical Name	CAS Number	Typical Value	Component RQ	Product RQ
ETHYLENE GLYCOL	107-21-1	90 - 100%	5000 lbs	5376.34 lbs

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ETHYLENE GLYCOL	107-21-1	90 - 100%

The Following Ingredients are Cited on the Lists Below:

Chemical Name	CAS Number	List Citations
DIETHYLENE GLYCOL	111-46-6	16, 18, 19
ETHYLENE GLYCOL	107-21-1	1, 13, 16, 17, 18, 19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Revision Changes:
Section 04: First Aid Notes was modified.
Section 06: Protective Measures was modified.
Section 14: DOT Technical Name - All was modified.
Section 13: Empty Container Warning was modified.
Section 08: Hand Protection was modified.
Hazard Identification: Health Hazards was modified.
Section 11: Oral Lethality Test Data was modified.
Section 14: Transport Document Name was modified.
Hazard Identification: Health Hazards was modified.
Section 16: Code to MHCs was modified.
Section 16: Code to PPEs was modified.
Section 16: Health Hazards was modified.
Section 16: Fire Fighting Media - Header was modified.
Section 16: Water Spill was modified.
Section 06: Notification Procedures was modified.

PRECAUTIONARY LABEL TEXT:
Contains: ETHYLENE GLYCOL
DANGER!
HEALTH HAZARDS
May cause harm to the unborn child. Harmful or fatal if swallowed.
Target Organs: Kidney | Reproductive system |

FIRST AID
Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Oral: Seek immediate medical attention.

Skin: Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

FIRE FIGHTING MEDIA
Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

SPILL/LEAK
Land Spill: Stop leak if you can do it without risk. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Recover by pumping or with suitable absorbent. Do not touch or walk through spilled material.

Water Spill: Stop leak if you can do it without risk. Report spills as required to appropriate authorities. Material will sink. This product emulsifies, disperses or is miscible in water. Consult an expert.

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Internal Use Only

MHC: 3, 0, 0, 0, 0, 0 PPEC: C

DGN: 7075328XUS (1011658)

MATERIAL SAFETY DATA SHEET

Automotive Environmental Services Corporation

PRODUCT AES HEAVY DUTY ANTIFREEZE

Emergency Telephone Number
Romic (650) 324-1638 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION — Effective 10-14-01

TRADE NAME: AES HEAVY DUTY ANTIFREEZE
DESCRIPTION: Ethylene glycol solution

NFPA 704M/HMIS RATING: 2/2 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Ethylene glycol	107-21-1	40+

SECTION 3 PRECAUTIONARY LABEL INFORMATION

DANGER: Harmful or fatal if swallowed. Ethylene glycol causes birth defects in laboratory animals. Prolonged or repeated breathing of vapor or mists may be harmful. Causes eye irritation. Do not get in eyes. Avoid breathing vapor or mists. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Induce vomiting. Give water. Call a physician at once.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician at once.

NOTE TO PHYSICIAN: No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

Automotive Environmental Services 2081 Bay Road✦ E. Palo Alto, California 94303

SECTION 5 HEALTH EFFECTS INFORMATION (CONTINUED)

EYE CONTACT: Can cause moderate irritation. Vapors may be irritating.
SKIN CONTACT: May cause irritation with prolonged contact.
INGESTION: Can be harmful or fatal. Three or four ounces of ethylene glycol may be fatal to humans. May cause kidney malfunction and central nervous system depression.
INHALATION: Prolonged inhalation of vapor may be harmful.

SYMPTOMS OF EXPOSURE:
ACUTE: Inhalation of high concentrations of ethylene glycol can cause giddiness, headaches, dizziness, vomiting, nausea, stupor or unconsciousness. Kidney damage may be noted by changes in urinary output. Liver damage may be noticed by yellow skin color.

AGGRAVATION OF EXISTING CONDITIONS: Individuals with pre-existing kidney or liver damage may experience a worsening of effects from ethylene glycol ingestion.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies of the ingredient(s) in Section 2 have been reviewed. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):
Ethylene glycol LD50 = 6 g/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS):
Ethylene glycol LD50 = 9.5 ml/kg

ACUTE INHALATION TOXICITY (ALBINO RATS):
Ethylene glycol LC50 = 0/8 deaths after 8 hours exposure in saturated air

OTHER TOXICITY RESULTS: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when administered by gavage or in drinking water at high concentrations.

CHRONIC TOXICITY RESULTS: Ethylene glycol: Two chronic feeding studies, using rats and mice, have not shown any evidence that the chemical causes dose-related increases in tumor incidence, or a different pattern of tumors compared to untreated controls. The absence of a carcinogenic

SECTION 6 TOXICOLOGY INFORMATION (CONTINUED)

potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear pale pink	FORM: Liquid	ODOR: Aromatic
DENSITY:	9.3 lbs/gal.	
SOLUBILITY IN WATER:	Insoluble	
SPECIFIC GRAVITY:	1.12 @ 73 Degrees F	ASTM D-1298
pH (NEAT) =	10 - 11	ASTM E-70
VISCOSITY:	17 cps @ 73 Degrees F	ASTM D-2983
FREEZE POINT:	2 Degrees F	ASTM D-1177
FLASH POINT:	Greater than 261 Degrees F (PMCC)	ASTM D-93

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Greater than 261 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, alcohol foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2 may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed. If significant mists or aerosols are generated, wear a NIOSH approved or equivalent respirator, (ANSI Z 88.2, 1980 for requirements and selection).

SECTION 10 PERSONAL PROTECTION EQUIPMENT (CONTINUED)

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.) when attaching feeding equipment or doing maintenance.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER Romic (650) 324-1638 (24 hours)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 10.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, (i.e. D001 through D017) nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified before disposal to a sanitary landfill. Can be incinerated in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Ethylene glycol - Systemic effects, possible birth defects based on tests with laboratory animals

Ethylene glycol (vapor) = TWA 50 ppm, 125 mg/m3 (ceiling) ACGIH/TLV

CERCLA/SUPERFUND, 40 CFR 117, 302:
This product contains sodium nitrite, a Reportable Quantity (RQ) substance and if 38,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
XX Delayed (chronic) health hazard
-- Fire hazard

SECTION 14 REGULATORY INFORMATION (CONTINUED)

-- Sudden release of pressure hazard
-- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product contains the following ingredient(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals.

Ethylene glycol	107-21-1	40+

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
If this product becomes a waste, it does not meet the criteria of a hazardous waste.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
This product contains the following ingredient covered by the Clean Water Act:

Sodium nitrite - Section 311

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:
This product contains the following ingredients covered by the Clean Air Act:

Ethylene glycol - Section 111

SECTION 14 REGULATORY INFORMATION (CONTINUED)

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
None of the chemicals on the current Proposition 65 list are known to be present in this product.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
Regulated in those states using the TLV for ethylene glycol as a criteria for listing.

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillian Publishing Company, Inc., N. Y., 2nd edition, 1980.

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DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

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PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

80-473 BATTERY CLEANER WITH ACID DECTECTOR

HMIS RATING	
Health	2
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	2
Flammability	4
Reactivity	0
NFPA 30B LEVEL	
N/A	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE TELEPHONE: 614-219-6100
EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER.....80-473
PRODUCT NAME.....Battery Cleaner with Acid Detector
CHEMICAL FAMILY.....N/A
DOT SHIPPING.....Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
Propane/Isobutane/N-butane (68476-86-8)	800ppm	800ppm		20
Triethanolamine (102-71-6)	NE	5mg/m^3		

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement.

3. PHYSICAL DATA

BOILING POINT (RANGE).....-43-651°F
VAPOR PRESSURE PSIG @ 70°F.....25-35
VAPOR DENSITY (AIR = 1).....>1
SOLUBILITY IN WATER.....Complete
SPECIFIC GRAVITY (H2O = 1).....0.9224
MELTING/FREEZING POINT.....32F
EVAPORATION RATE (Ether=1).....>1
VOC content (by weight).....493g/L
APPEARANCE AND ODOR.....Transparent amber / amine odor

4. FIRE AND EXPLOSION DATA

FLASH POINT.....-156°F
UPPER EXPLOSIVE LIMIT (%).....10.0
LOWER EXPLOSIVE LIMIT (%).....1.3
EXTINGUISHING MEDIA.....Dry chemical, CO_2, foam, water fog
SPECIAL FIREFIGHTING PROCEDURES.....Container can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

FIRE AND EXPLOSION HAZARDS.....Vapors can travel to a source of ignition and flash back. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity or other sources of ignition; they may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY.....Eyes, Skin, Inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC).....Vapors irritating to eyes and respiratory tract. Vapors may cause flash fire or explosion. Overexposure may cause nervous system damage, lung damage, kidney damage.

EYE CONTACT.....Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.
SKIN CONTACT.....Prolonged or reaped contact can result in defatting and drying of the skin which may result in skin irritation an dermatitis.
INHALATION.....Headaches, dizziness, nausea, decreased blood pressure, changes in hear rate and cyanosis may result from overexposure to vapor or skin exposure. Prolonged inhalation may be harmful.
INGESTION.....This material may be harmful or fatal if swallowed. If a corrosive product, may cause severe and permanent damage to the mouth throat and stomach.

5. HEALTH EFFECTS DATA CON'T.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.....None known

FIRST AID PROCEDURES

EYES.....Flush with water for at least 15 minutes, obtain medical attention.
SKIN CONTACT.....Wash with soap, large volumes of water. Obtain medical attention immediately.
INGESTION.....Do not induce vomiting, obtain immediate medical attention.
INHALATION.....Remove to fresh air. Restore breathing and keep calm and warm.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines).....Presently not on any lists.

6. REACTIVITY

STABILITY.....Stable
INCOMPATIBILITIES.....Strong acids, alkalis, oxidizers and amines. Avoid all sources of ignition, welding arcs, and open flames.
HAZARDOUS DECOMPOSITION PRODUCTS.....Oxides of carbon, nitrogen
HAZARDOUS POLYMERIZATION.....Will not occur
HAZARDOUS POLYMERIZATION CONDITIONS.....None known.

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS.....Safety glasses; protective neoprene gloves; ventilation sufficient to maintain vapor concentrations below TLV; wear NIDSH approved respirator if TLV is exceeded
WASH REQUIREMENTS.....Wash with soap and water.
SPILL OR LEAK PROCEDURES.....Remove all sources of ignition; use absorbent sweeping compound to soak up material; wash area to prevent slipping
WASTE DISPOSAL METHODS.....Dispose of in accordance with local, state, and federal hazardous waste regulations
HANDLING & STORAGE.....Store below 120°F; keep away from heat, sparks, or open flame; do not incinerate aerosol cans
OTHER PRECAUTIONS.....Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Specializing in Materials Management since 1923

I. PRODUCT IDENTIFICATION

Chemical/Trade Name (as used on label):

Battery Electrolyte

Chemical Family/Classification:

Acid / Corrosive

Manufacturer's Name/Address

Yuasa Battery, Inc.
2901 Montrose Avenue
Laureldale, PA 19605

Telephone

For information and emergencies, contact the Yuasa Battery Environmental Resources Dept. at (610) 929-5781

24-hour Emergency Response Contact:

CHEMTREC DOMESTIC: 800.424.9300
CHEMTREC INTERNATIONAL: 1.703.527.3887

II. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Components	OSHA PEL	ACGIH TLV	% (Optional)
Sulfuric Acid (H_2SO_4)	1000 $\mu g/m^3$	1000 $\mu g/m^3$	30-40
Water (H_2O)	--	--	60-70

CAS #7664-93-9

NFPA Hazard Rating:

Flammability (Red)	= 0
Health (Blue)	= 3
Reactivity (Yellow)	= 2

Sulfuric acid is water-reactive if concentrated.

III. PHYSICAL DATA

Electrolyte:

Boiling Point:	203-204°F	Specific Gravity (H2O = 1):	1.215 to 1.350
Melting Point:	Not Applicable	Vapor Pressure (mm Hg):	10
Solubility in Water:	100%	Vapor Density (AIR = 1):	Greater than 1
Evaporation Rate: (Butyl acetate = 1)	Less than 1	% Volatile by Weight:	Not Applicable

Appearance and Odor: Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable Flammable Limits: LEL = Not Applicable UEL = Not Applicable

Extinguishing media: CO2; foam; dry chemical; water; water fog

Special Fire Fighting Procedures: Water applied to sulfuric acid generates heat and causes acid to splatter. Wear full-cover sulfuric acid resistant clothing.

Unusual Fire and Explosion hazards: Reacts violently with metals, nitrates, chlorates, carbides and other organic materials. Reacts with most metals to yield explosive and flammable hydrogen gas.

V. REACTIVITY DATA

Stability:	100% Stable
Conditions to Avoid:	Contact with organic materials, combustibles, strong reducing agents, metals, strong oxidizers, water.
Incompatibility: (materials to avoid)	Contact with metals may produce toxic sulfur dioxide fumes and/or hydrogen gas.
Hazardous Decomposition Products:	Sulfur trioxide, carbon monoxide, sulfuric acid fumes, sulfur dioxide.
Hazardous Polymenzation:	Will not occur.

VI. HEALTH HAZARD DATA

Routes of Entry:	Sulfuric acid is harmful by all routes of entry.
Inhalation:	Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.
Ingestion:	May cause severe irritation of mouth, throat, esophagus and stomach.
Skin Contact:	Severe irritation, burns and ulceration.
Eye Contact:	Severe irritation, burns, cornea damage, blindness.
Effects of Overexposure - Acute:	Severe skin irritation, damage to cornea, upper respiratory irritation.
Effects of Overexposure - Chronic:	Erosion of tooth enamel; inflammation of nose, throat and bronchial tubes.
Carcinogenicity:	The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category I carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product.
Symptoms of Exposure:	Cough; increased respiratory rate; stinging, burning sensation on skin; eye irritation; discoloration of teeth.

VI. HEALTH HAZARD DATA (continued)

Medical Conditions Generally Aggravated by Exposure:

Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulfuric acid with skin may aggravate skin diseases such as eczema and contact dermatitis.

Emergency and First Aid Procedures:

Inhalation:	Remove to fresh air immediately. If breathing is difficult, give oxygen.
Ingestion:	Give large quantities of water; DO NOT INDUCE VOMITING; consult physician.
Skin:	Flush with large amounts of cool water for at least 15 minutes; remove contaminated clothing, including shoes.
Eyes:	Flush immediately with large amounts of cool water for at least 15 minutes; consult physician.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures:	Stop flow of material, contain/absorb small spills with dry sand, earth, vermiculite. Do not use combustible materials. If possible, carefully neutralize the spill with soda ash, sodium bicarbonate, lime, etc. If used, cautiously dilute with water. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer.
Waste Disposal Methods:	Place neutralized slurry in sealed containers and dispose of as hazardous waste, as applicable. Large water-diluted spills, after neutralization and testing, should be managed in accordance with local, state and federal requirements. Consult state environmental agency and/or federal EPA.
Handling and Storage:	Handle cautiously; avoid contact with skin and eyes. Storage and handling areas should be equipped with proper containment to capture and neutralize spills. In addition, these areas should be equipped with eyewash stations and safety showers.
Precautionary Labeling:	POISON - CAUSES SEVERE BURNS DANGER - CONTAINS SULFURIC ACID

VIII. CONTROL MEASURES

Engineering Controls:	Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant.
Respiratory Protection:	None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.
Protective gloves:	Rubber or plastic acid-resistant gloves with elbow-length gauntlet.
Eye Protection:	Chemical goggles or face shield.
Other Protection:	Acid-resistant apron. Under severe exposure or emergency conditions, wear acid-resistant clothing and boots.

VIII. CONTROL MEASURES (continued)

Emergency Flushing: In areas where sulfuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

IX. OTHER REGULATORY INFORMATION

NFPA Hazard Rating for sulfuric acid:

Flammability (Red)	=	0
Health (Blue)	=	3
Reactivity (Yellow)	=	2

Sulfuric acid is water-reactive if concentrated.

U.S. DOT

The transportation of electrolyte within the continental United States is regulated by the U.S. DOT through the Code of Federal Regulations, Title 49 (CFR 49). These regulations classify electrolyte as a hazardous material. Electrolyte must be packed according to 173.154, 173.202 or 173.242 depending upon the nature of the shipment. The shipping information for electrolyte is as follows:

Proper Shipping Name:	Battery Fluid, Acid
Hazardous Class:	8
UN Identification:	UN2796
Packing Group:	II
Label / Placard Required:	Corrosive

When battery fluid is shipped in a carton with a dry battery, CFR 49, 172.102 special provision N6 states that this combination packaging must conform either section 173.159 (g) or (h).

IATA

The international transportation of electrolyte is regulated by the International Air Transport Association (IATA). These regulations also classify electrolyte as a hazardous material. Electrolyte must be packed according to IATA Packing Instruction Y809. The shipping information is as follows:

Proper Shipping Name:	Battery Fluid, Acid
Hazardous Class:	8
UN Identification:	UN2796
Packing Group:	II
Label / Placard Required:	Corrosive

IX. OTHER REGULATORY INFORMATION (continued)

IMDG

The international transportation of electrolyte is regulated by the International Maritime Dangerous Goods code (IMDG). These regulations also classify electrolyte as a hazardous material. Electrolyte must be packed according to IMDG code page 8230. The shipping information is as follows:

Proper Shipping Name: Battery Fluid, Acid
Hazardous Class: 8
UN Identification: UN2796
Packing Group: II
Label / Placard Required: Corrosive

RCRA: Spilled sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosivity).

CERCLA (Superfund) and EPCRA:

(a) Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency Planning Community Right to Know Act) is 1,000 lbs. State and local reportable quantities for spilled sulfuric acid may vary.

(b) Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of 1,000 lbs.

(c) EPCRA Section 302 notification is required if 1,000 lbs. or more of sulfuric acid is present at one site. The quantity of sulfuric acid will vary by battery type. Contact your Yuasa, Inc. representative for additional information.

(d) EPCRA Section 312 Tier 2 reporting is required for batteries if sulfuric acid is present in quantities of 500 lbs. or more and/or if lead is present in quantities of 10,000 lbs. or more.

(e) Supplier Notification: This product contains toxic chemicals which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39, the following information is provided to enable you to complete the required reports:

Toxic Chemical	CAS Number	Approximate % by Wt.
Sulfuric Acid	7664-93-9	30-40

If you distribute this product to other manufacturers in SIC Codes 20 through 39, this information must be provided with the first shipment of each calendar year.

TSCA

Ingredients in battery electrolyte are listed in the BCA Registry as follows:

Components	CAS Number	BCA Status
Sulfuric Acid (H_2SO_4)	7664-93-9	Listed

CAA

Yuasa Battery, Inc. supports preventative actions concerning ozone depletion in the atmosphere due to emissions of CFC's and other ozone depleting chemicals (ODC's), defined by the USEPA as Class I substances. Pursuant to Section 611 of the Clean Air Act Amendments (CAAA) of 1990, finalized on January 19, 1993, Yuasa, Inc. established a policy to eliminate the use of Class I ODC's prior to the May 15, 1993 deadline.

80-881 ULTRA PRO•MAX GLOSS BLACK PAINT

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE TELEPHONE: 614-219-6100
EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER..... 80-881
PRODUCT NAME ..... ULTRA PRO• MAX GLOSS BLACK PAINT 16OZ AEROSOL CAN
CHEMICAL FAMILY..... N/A
DOT SHIPPING..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	REL	%
Acetone (00067-64-1)	-	-	-	22.56
Propane (00074-98-6)	1000ppm	1000ppm	2500ppm	15.74
N-Butane (00106-97-8)	-	800ppm	800ppm	9.24
Barium Sulfate (07727-43-7)	5mg/m3	5mg/m3	10mg/m3	8.51
*Glycol Ether EP (02807-30-9)	-	-	-	5.45
*Methyl Iso-butyl Ketone (00108-10-1)	100ppm	75ppm	75ppm	5.16
Methyl Propyl Ketone (00107-87-9)	200ppm	150ppm	250ppm	3.33
*Xylene (01330-20-7)	100ppm	150ppm	150ppm	2.69
PM Acetate (108-65-6)	-	-	-	1.83
Isobutyl Acetate (110-19-00)	150ppm	150ppm	150ppm	1.41

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement. **Ceiling

3. PHYSICAL DATA

BOILING POINT (RANGE)..... -44°C (-47°F)
VAPOR PRESSURE PSIG @ 70°F..... 40 PSI, 2750 hPa
VAPOR DENSITY (AIR = 1)..... N/A
SOLUBILITY IN WATER..... Slight
SPECIFIC GRAVITY (H2O = 1)..... 0.77- 0.85
MELTING/FREEZING POINT..... N/A
EVAPORATION RATE (Ether=1)..... >1
VOC content (by weight) 46.1%, 495.5g/L
APPEARANCE AND ODOR..... Black liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%) 10.9%
LOWER EXPLOSIVE LIMIT (%) 1.7%
EXTINGUISHING MEDIA..... Extinguishing powder, CO_2, Sand. Fight larger fires with water spray or alcohol resisant foam.
SPECIAL FIREFIGHTING PROCEDURES..... Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS..... Vapors may form explosive mixture with air.
NFPA Flammability Hazard.....4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE
ROUTE OF ENTRY..... Skin absorption, Inhalation, Ingestion, Eye contact, Skin contact
HEALTH HAZARDS
(ACUTE AND CHRONIC)..... Extremely flammable. Irritating to eyes. Vapors may cause drowsiness and dizziness. May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

MEDICAL CONDITIONS GENERALLY
AGGRAVATED BY EXPOSURE..... Heart disease, respiratory disorders.

5. HEALTH EFFECTS DATA CON'T

FIRST AID PROCEDURES
EYE CONTACT ..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT ..... Wash with soap and water. Get medical attention if irritation develops or persists.
INGESTION..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
INHALATION ..... Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Rescuers should put on appropriate protective gear. Keep victim warm. Get immediate medical attention.

SPECIAL HEALTH EFFECTS
CARCINOGEN (OSHA Guidelines)..... Prop 65: This product contains chemicals known to the state of California to cause cancer.

6. REACTIVITY

STABILITY..... Stable under normal conditions.
INCOMPATIBILITIES..... No dangerous reactions known.
HAZARDOUS DECOMPOSITION ..... No decomposition if used according to specifications.
PRODUCTS ..... Fumes may contain CO_2, CO.
HAZARDOUS POLYMERIZATION..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS.....None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT
REQUIREMENTS..... Safety goggles. Local exhaust ventilation may be necessary to control contaminants to within TLVs during the use of this product.
WASH REQUIREMENTS..... Wash with soap and water.
SPILL OR LEAK PROCEDURES Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS Dispose of in accordance with local, state, and federal regulations
HANDLING & STORAGE..... Wash thoroughly after handling. Keep away from heat, sparks and flames. Store below 120°F.
OTHER PRECAUTIONS..... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors, protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Specializing in Materials Management since 1923

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name/Trade Name	**Pure Bright Bleach**
Manufacturer:	KIK CUSTOM PRODUCTS 2921 Corder Street Houston, Texas 77054
Contact Number:	Tel: 1 905 660-0444
24 Hour Emergency Contact Number:	Tel: 1 800 255-3924
Prepared By:	KIK CUSTOM PRODUCTS Laboratory
Replaces Date:	January 16, 2007
Date Last Revised:	**November 19, 2007**

Section 2. Hazardous Ingredients

Name	%	CAS#	LD50/LC50
Sodium Hypochlorite	6.0 - 7.0	7681-52-9	5800 mg/kg / >10500 mg/m^3 (1hr)

Section 3. Physical Data

State	Liquid	**pH**	12.6 maximum
Appearance	Clear Colorless	**% Volatile**	93% Approx.
Odour	Chlorine	**Boiling Point**	100°C
Specific Gravity	1.080 minimum	**Vapour Pressure**	N Av
Solubility	100%		

Section 4. Fire & Explosion

Flammable: YES NO X
Means of Extinction: Water, Carbon Dioxide, Dry Chemical or Foam
Special Procedures: Fire fighters should wear self-contained breathing apparatus.
Flash Point: & Method: Not Applicable
Hazardous Combustion Products: Chlorine Gas.

Section 5. Reactivity Data

Chemical Stability: YES X NO
Conditions: Temperature above 40°C, sunlight and metals,
Incompatibility: YES X NO
What Substances: Acids, ammonia, urea, metals & oxidizers.
Reactivity / Conditions: Not Applicable
Hazardous Decomposition Products: Chlorine gas released by contact with acids. Contact with ammonia or urea produces nitrogen gas and chloramines. Oxygen is released on contact with metals.

Section 6. Toxicological Properties

Route of Entry	Skin Contact	X	Skin Absorption	Eye Contact	X
	Inhalation Acute	X	Inhalation Chronic	Ingestion	X

Effects of Acute Exposure: Inhalation of vapours will irritate breathing passages and may cause breathing difficulty. CORROSIVE will cause severe irritation to eyes and skin. May cause permanent damage if not treated properly. Ingestion can cause corrosion of mucous membranes, severe esophageal burns and perforation of esophagus or stomach.
Effects of chronic exposure: Not Known.
Carcinogenicity Reproductive Effects: **Teratogenicity** **Mutagenicity**: Effects not known.

Section 7. Preventative Measures

Protective Equipment
Gloves: Impervious PVC or Neoprene. Eyes: Chemical splash goggles. Face shield also helpful. Respiratory: Not normally required. Footwear: Protect shoes and feet when using product for floor cleaning.
LEAK AND SPILL PROTECTION: Small spills: Dilute product by flooding area with large quantity of water and flush to sanitary sewer. Large spills: Contain run-off by diking with suitable material. Soak up liquid on inert absorbent and transfer to approved container. Prevent spill from entering sewers or waterways
WASTE DISPOSAL: Reclaim or dispose in accordance with local regulations.
STORAGE REQUIREMENTS: Store in a cool, dry and well-ventilated area.

Section 8. First Aid Measures

Skin: Wash with soap and water
Eyes: Flush eyes with cool running water holding eyelids apart to ensure thorough rinsing for 15 minutes. Remove contact lenses. See a doctor immediately.
Inhalation: Move to fresh air and restore breathing, if required.
Ingestion: DO NOT INDUCE VOMITING! Drink large amounts of water. Do not give anything by mouth to a convulsing or unconscious person. See a doctor immediately.
General Advice: If irritation occurs see a doctor immediately.

Section 9. Preparation Information

WHMIS Rating:	Health Hazard	2
	Fire Hazard	0
	Reactivity	2

DOT: Non-regulated

MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid
MSDS NO.
Revision Date:

Date Printed 10/07/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid
Chemical Family: GLYCOL ETHER
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: NAPA, P. O. Box 421268, Indianapolis, IN 46241

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLW STEL
Diethylene Glycol 111-46-6	5-15	None Known	None Known	None Known	None Known
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	None Known	None Known	None Known	None Known
Triethylene glycol monomethyl ether 112-35-6	6-25	None Known	None Known	None Known	None Known
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	None Known	None Known	None Known	None Known
Triethylene glycol monobutyl ether 143-22-6	20-39	None Known	None Known	None Known	None Known
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	None Known	None Known	None Known	None Known
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	None Known	None Known	None Known	None Known
Polyethylene Glycol 25322-68-3	5-20	None Known	None Known	None Known	None Known
Polyethylene glycol monobutyl ether 9004-77-7	5-20	None Known	None Known	None Known	None Known
Polyalkylene Glycols 9038-95-3	5-20	None Knwon	None Known	None Knwon	None Known
Diethylene Glycol Monomethyl Ether 111-77-3	<5	None Known	None Known	None Known	None Known
Diethylene Glycol Monoethyl Ether 111-90-0	<5	None Known	None Known	None Known	None Known
Trade Secret : Trade Secret Inhibitor Package	<3	None Known	None Known	None Known	None Known

3. HAZARDS IDENTIFICATION

Emergency Overview: Danger: May be fatal if swallowed. This material is an eye irritant. May cause allergic skin reaction. Vapors are mildly to markedly irritating to the lungs depending on the exposure level. Ingestion may cause abdominal discomfort, nausea, and vomiting. May produce central nervous system depression and kidney damage.

HMIS Classification: Health: 2 Flammability: 1 Physical Hazard: 0
NFPA Rating: Health: 2 Flammability: 1 Reactivity: 0

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention. Vapors or mists from this material can irritate the nose, throat and lungs, and cause signs and sysmptoms of central nervous system depression, depending on the concentration and duration of exposure.

Skin Contact: Wash with soap and water. Remove contaminated clothing and shoes, and launder before reuse. Get medical attention if

irritation persists.

5. FIRE FIGHTING MEASURES

Flammable Properties
Flash Point °F(°C): >135C. (>275 F.)
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical. DO NOT use straight water streams.
Protection Of Fire-Fighters:
Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Do not realse runoff from fire control methods to sewers or waterways. Fight from a maximum distance or use unmanned hose holders or monitor nozzles. Containers can build up pressure if exposed to heat; cool with flooding quantities of water until well after the fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of vessel.
Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide. Unidentified organic compounds.
Aerosol Comments: Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Avoid all sources of ignition; heat, sparks and open flames. Contain any liquid from leaking containers. Wear protective equipment specified. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.
If clean-up is not immediate, cover spill with plastic or canvas to keep dry.
Environmental Precautions: Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

7. HANDLING AND STORAGE

Handling and Storage: Do Not Swallow. Store in a cool, dry place. Use only in a well ventilated area. Keep container closed when not in use to prevent contact with acidic, basic or oxidizing materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Exhaust ventilation. Eyewash stations. Showers.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves. Rubber, Neoprene or Vinyl.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, yellow to amber colloidal liquid
Odor: MILD
pH Value: 10 - 11.5
Vapor Pressure: Not Determined
Vapor Density (Air=1): Not Determined
Boiling Point (°F): 480 F. (249 C)
Melting/Freezing Point: -58 F. (-50 C.)
Solubility in Water: SOLUBLE
Bulk Density at 20°C: 8.33 - 9.02 lb/gal
Molecular Weight: Mixture
Evaporation Rate: <.01
Viscosity: Not determined.
Specific Gravity (H20=1): 1.000 - 1.070 @ 4 C.
VOC Content(%): Not determined.
Decomposition Temperature: Not Known

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE.
Conditions to Avoid: Keep away from heat,sparks and flame.
Materials to Avoid: Avoid contact with acidic, basic or oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Unknown organic compounds.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Diethylene Glycol 111-46-6	5-15	Oral	Rats	LD50 12565 mg/kg
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Oral	Rats	LD50 5660 mg/kg
Triethylene glycol monomethyl ether 112-35-6	6-25	Oral	Rats	LD50 11300 uL/kg

Ingredient/CAS No.	wt. %	Route	Species	Dose
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Oral	Rats	LD50 7750 mg/kg
Triethylene glycol monobutyl ether 143-22-6	20-39	Oral	Rats	LD50 5300 mg/kg
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	NA	NA	Not Known
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	NA	NA	NA
Polyethylene Glycol 25322-68-3	5-20	Oral	Rats	LD50 28 gm/kg
Polyethylene glycol monobutyl ether 9004-77-7	5-20	NA	NA	NA
Polyalkylene Glycols 9038-95-3	5-20	Oral	Rats	LD50 12300 uL/kg
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Oral	Rats	LD50 4 mL/kg
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Oral	Rats	LD50 5500 mg/kg
Trade Secret : Trade Secret Inhibitor Package	<3	Oral	Rats	>2000 mg/kg

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	6-25	Not Listed	Not Listed	Not Listed
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	20-39	Not Listed	Not Listed	Not Listed
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	Not Listed
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	Not Listed
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	Not Listed
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	Not Listed
Trade Secret : Trade Secret Inhibitor Package	<3	Not Known	Not Known	Not Known

12. ECOLOGICAL INFORMATION

Trade Name: NAPA DOT 3 Brake Fluid
MSDS NO.
Revision Date:

Date Printed 10/07/2004

Ecological testing has not been conducted on this product.

14. TRANSPORTATION INFORMATION

U.S. DOT:
Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
UN/NA Number: Not Applicable
DOT Packing Group: Not Applicable
IMDG:
Proper Shipping Name: Not Applicable
Hazard Class: Non-Hazardous
Hazard Subclass: Not Applicable
UN No.: Not Applicable
Packing Group: Not Applicable
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	NA	NA
Triethylene glycol monomethyl ether 112-35-6	6-25	Listed	Not Listed	NA	NA
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	NA	NA
Triethylene glycol monobutyl ether 143-22-6	20-39	Listed	Not Listed	NA	NA
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	NA	NA
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	NA	NA
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	NA	NA
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	NA	NA
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	NA	NA
Trade Secret : Trade Secret Inhibitor Package	<3	Not Known	Not Known	NA	NA

No specific component of this material is listed as a Hazardous Substance CERCLA (40 CFR 261). However, this product contains various ethylene glycols and glycol ethers which are each included as a broad category on the CERCLA Hazardous substances list.

SARA 311/312 Hazard Catagories: Delayed

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male

MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid
MSDS NO.
Revision Date:

Date Printed 10/07/2004

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	6-25	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	20-39	Not Listed	Not Listed	Not Listed	Not Listed
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret : Trade Secret Inhibitor Package	<3	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.
Disclaimer:

The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Zak Products, 3006 Skyway Circle South, Irving, TX 75038

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Conoco Phillips, Houston, TX 77079

MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid
MSDS NO.
Revision Date:

Date Printed 10/07/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: The Heartland, P.O. Box 1520, Wheaton, IL 60189

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Synonyms: None

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Santech, 2450 Handley Ederville Rd., Fort Worth, TX 76118

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Synonyms: None

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Cyclo Industries, 10190 Riverside Drive, Palm Beach Gardens, FL 33410-4881

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Synonyms: None

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Warren Oil Co., Highway 301 N, Dunn, NC 28334

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Bowes Seal Fast, Indianapolis, IN 46218

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Master Corporation, Memphis, TN 38138

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid
MSDS NO.
Revision Date:

Date Printed 10/07/2004

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: AGCO Parts, 1500 North Raddant Road, Batavia, IL 60510

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz
Chemical Family: GLYCOL ETHER

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Kar Products, P.O. Box 6908, Cleveland, OH 44101

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As used on label and list)
Master Appliance Ultratane Butane Fuel

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I.

MANUFACTURER'S NAME	Master Appliance Corp.	**EMERGENCY TELEPHONE NO.**	1-800-535-5053 (Infotrac)
ADDRESS	2420 18TH Street	**TELEPHONE NO. FOR INFORMATION**	1-262-633-7791
	PO BOX 68	**DATE PREPARED**	March 6, 2003
	RACINE WI 53401	**SIGNATURE OF PREPARER**	(optional)

SECTION II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS

(Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended % (optional)
Isobutane (CAS 75-28-5)	NE	800ppm	
Propane (CAS 74-98-6)	1000ppm	NE	
Butane (CAS 106-97-8)	800ppm	800ppm	

SECTION III. SHIPPING INFORMATION

PROPER SHIPPING NAME	Petroleum Gases, Liquefied
CLASS AND DIVISION NUMBER	2.1 (Flammable Gas)
UN NUMBER	UN-1075
REQUIRED LABELS	Flammable Gas label on each non-bulk package
PACKING GROUP	Not Listed

SECTION IV. PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	11°F	**SPECIFIC GRAVITY (H_20 = 1)**	.571
VAPOR PRESSURE @70°F (psig)	30 ± 2	**MELTING POINT**	-138c
VAPOR DENSITY (air = 1)	1	**EVAPORATION RATE (Butyl Acetate = 1)**	1
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Clear gas with light ethereal odor		

SECTION V. FIRE AND EXPLOSION HAZARD DATA

FLAMMABLE LIMITS	LEL: 1.4 UEL: 9.5
FLASH POINT (METHOD USED)	-100°F Estimated
EXTINGUISHING MEDIA	Dry chemical, foam, carbon dioxide
SPECIAL FIRE FIGHTING PROCEDURES	Use water spray to cool containers. Avoid rocketing containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Containers generate pressure when heated causing violent bursting and dangerous propelling of containers.

SECTION VI. REACTIVITY DATA

STABILITY	**Stable:** Yes Unstable:
CONDITIONS TO AVOID	Not established
INCOMPATIBILITY (Materials to Avoid)	Oxygen and strong oxidizing materials
HAZARDOUS DECOMPOSITION OR BYPRODUCTS	Carbon oxides formed when burned
HAZARDOUS POLYMERIZATION	May occur: **Will not occur:** Yes
CONDITIONS TO AVOID	Not established

SECTION VII. HEALTH HAZARD DATA

ROUTE(S) OF ENTRY **Inhalation?** Yes (A) **Skin?** Yes (B) **Ingestion?** N/A

HEALTH HAZARDS (Acute and Chronic) (A) Simple asphyxiant, dizziness, disorientation, headache, excitation, central nervous system depression, anesthesia.
(B) Liquid contact with exposed skin can cause frostbite.

CARCINOGENICITY? N/A **NTP?** N/A **IARC MONOGRAPHS?** N/A **OSHA REGULATED?** N/A

SIGNS AND SYMPTOMS OF EXPOSURE Dizziness, headache, ect.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE None

EMERGENCY AND FIRST AID PROCEDURES Remove from exposure. If irritation develops seek medical attention.

SECTION VIII. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Protect from ignition. Ventilate area thoroughly.

WASTE DISPOSAL METHOD Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State and Local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store below 120°F. In case of accidental puncturing with forklift, shut off forklift and any other possible source of ignition. Ventilate area.

OTHER PRECAUTIONS Use with adequate ventilation.

SECTION IX. CONTROL MEASURES

RESPIRATORY PROTECTION (Specific Type)	N/A
VENTILATION	Adequate
LOCAL EXHAUST	For small enclosed work areas
MECHANICAL (General)	Adequate for storage
PROTECTIVE GLOVES	Not required for normal handling
EYE PROTECTION	Safety Glasses
OTHER PROTECTIVE CLOTHING OR EQUIPMENT	Not required for normal handling
WORK/HYGIENIC PRATICES	N/A

SECTION X. NFPA HAZARD CODES – HMIS RATING

HEALTH: 1 **FIRE:** 4 **REACTIVITY:** 0

MSDS--CHEMSTRIP
MATERIAL SAFETY DATA SHEET CHEMSTRIP

DATE OF ISSUE: 05/20/2002
SUPERCEDES: 06/18/1999

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
CHEMSTRIP

Chemical Family:
CHLORINATED SOLVENT

Formula Mixture:
X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By: C williamson/Chemist
Product Code Number: 0007
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients):	METHYLENE CHLORIDE
Hazard:	IRR/CARC
TLV:	50 PPM 1
PEL:	25 PPM 2
STEL:	125 PPM
CAS#:	75-09-2

Chemical Name (Ingredients):	PETROLEUM WAX
Hazard:	IRRITANT
TLV:	2 MG/M3 *1
PEL:	NOT EST.*2
STEL:	NOT EST.
CAS#:	64742-43-4

Chemical Name (Ingredients):	METHANOL
Hazard:	IRRITANT
TLV:	200 PPM $1
PEL:	200 PPM $2
STEL:	250 PPM
CAS#:	67-56-1

Chemical Name (Ingredients):	ISOPROPANOL
Hazard:	IRRITANT
TLV:	400 PPM 1
PEL:	400 PPM 2
STEL:	500 PPM
CAS#:	67-63-0

Chemical Name (Ingredients):	* EXPOSURE LIMIT FOR FUMES
Hazard:	
TLV:	
PEL:	
STEL:	
CAS#:	

SECTION IIa - NON-HAZARDOUS INGREDIENTS

(NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE)

Secret Registry #: 409363-5512P

SECTION III - PHYSICAL DATA

Boiling Point (f):	105°
Specific Gravity (H2O=1):	1.25
Vapor Pressure (MM HG):	329.9
Color:	COLORLESS/LT YELLOW
Vapor Density (Air=1):	2.9
Odor:	CHLORINATED SOLVENT
PH @ 100%:	9.7**
Clarity:	TRANSPARENT/SL HAZY
Volatile by Volume:	93.6
Evaporation Rate (BU A/C=1):	22.7
H2O Solubility:	NEGLIGIBLE
Viscosity:	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200°F / SETAFLASH
Flammable Limits: METHYLENE CHLORIDE LEL: 12.0% UEL:15.0%

Extinguishing Media:
Foam: X Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.

Unusual Fire and Explosion Hazards:
PHOSGENE CAN BE FORMED AT TEMPERATURES ABOVE 1000°F.

Aerosol Level (NFPA 30B): N/A
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 2 Flammability: 2 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS TEARING, REDNESS, BLURRED VISION AND CONJUNCTIVITIS. PROLONGED CONTACT MAY CAUSE POSSIBLE TRANSIENT CORNEAL INJURY. SKIN CONTACT: CAUSES SEVERE IRRITATION SEEN AS ITCHING AND REDNESS. PROLONGED CONTACT CAN CAUSE A BURNING SENSATION AND MAY CAUSE DEFATTING OF THE SKIN. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS WITH EFFECTS SIMILIAR TO INGESTION AND MAY CAUSE AN ALLERGIC SKIN REACTION. INHALATION: CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. INHALATION AT LOW LEVELS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EEFECTS SUCH AS HEADACHE, DIZZINESS, DROWSINESS, WEAKNESS, UNCONCIOUSNESS AND POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION. INGESTION: MAY CAUSE IRRITATION SEEN AS NAUSEA, VOMITING AND DIARRHEA. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. AVOID ALCOHOL CONSUMPTION.

SWALLOWING AS LITTLE AS 1 TO 2 OUNCES OF METHANOL CAN RESULT IN METABOLIC ACIDOSIS LEADING TO OPTIC NERVE DAMAGE RANGING FROM DIMINISHED VISUAL CAPACITY TO COMPLETE BLINDNESS AND DEATH.

-Chronic (Long Term Exposure)

EXCESSIVE EXPOSURE MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. IARC AND NTP HAVE LISTED METHYLENE CHLORIDE AS A POSSIBLE HUMAN CARCINOGEN. TARGET ORGANS: CENTRAL NERVOUS SYSTEM, LUNGS, LIVER, KIDNEY, HEART AND BLOOD-FORMING ORGANS. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS AND PRE-EXISTING LIVER AND KIDNEY DISEASES AND PRE-EXISTING BLOOD DISEASES SUCH AS ANEMIA.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption: X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

METHANOL IS METABOLIZED TO FORMALDEHYDE AND FORMIC ACID. THIS IN TURN, MAY CAUSE METABOLIC ACIDOSIS, VISUAL DISTURBANCES AND BLINDNESS. BECAUSE METABOLISM MUST OCCUR BEFORE THE TOXIC EFFECTS, TOXIC SYMPTOMS MAY BE DELAYED FROM 6 TO 30 HOURS FOLLOWING INGESTION. ETHANOL COMPETES FOR THE SAME METABOLIC PATHWAY AND HAS BEEN USED AS AN ANTIDOTE. METHANOL IS EFFECTIVELY REMOVED BY HEMODIALYSIS. CHLORINATED HYDROCARBONS MAY SENSITIZE THE HEART TO EPINEPHRINE AND OTHER CIRCULATING CATECHOLAMINES SO THAT ARRHYTHMIAS MAY OCCUR. CAREFUL CONSIDERATION OF THIS POTENTIAL ADVERSE EFFECT SHOULD PRECEDE ADMINISTRATION OF EPINEPHRINE OR OTHER CARDIAC STIMULANTS AND THE SELECTION OF BRONCHODILATORS.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes NTP: Yes OSHA: No
ACGIH: NO OTHER: NO

VOC: 9.8% BY WEIGHT, 15.5% BY VOLUME, 126.2 G/L

METHYLENE CHLORIDE

ORL-HMN LDLO: 357 MG/KG	3.
ORL-RAT LD50: 1600 MG/KG	3.
SKN-RBT SDT: 100 MG/24H MODERATE	3.
EYE-RBT SDT: 162 MG MODERATE	3.
IHL-RAT LC50: 52 G/M3	3.
IHL-HMN LDLO: 357 MG/KG	3.

IHL-HMN TCLO: 500 PPM/8H 3.

IARC AND NTP HAVE LISTED METHYLENE CHLORIDE AS A POSSIBLE HUMAN CARCINOGEN BECAUSE STUDIES HAVE SHOWN AN INCREASE IN MALIGNANT TUMORS IN MICE AND BENIGN TUMORS IN RATS. OTHER ANIMAL STUDIES AND SEVERAL EPIDEMIOLOGICAL HUMAN STUDIES HAVE FAILED TO SHOW ANY TUMORIGENIC RESPONSES.

TUMORIGENIC DATA
IHL-RAT TCLO: 3500 PPM/6H/2Y-I 3.

METHYLENE CHLORIDE HAS BEEN EVALUATED FOR POSSIBLE CANCER CAUSING EFFECTS IN LABORATORY ANIMALS. INHALATION STUDIES AT CONCENTRATIONS OF 2000 AND 4000 PPM INCREASED THE INCIDENCE OF MALIGNANT LIVER AND LUNG TUMORS IN MICE. THREE INHALATION STUDIES OF RATS HAVE SHOWN INCREASED INCIDENCE OF BENIGN MAMMARY GLAND TUMORS IN FEMALE RATS AT CONCENTRATIONS OF 500 PPM AND ABOVE AND INCREASES IN BENIGN MAMMARY GLAND TUMORS IN MALES AT CONCENTRATIONS OF 1500 PPM AND ABOVE. RATS EXPOSED TO 50 AND 200 PPM VIA INHALATION SHOWED NO INCREASED INCIDENCE OF TUMORS. MICE AND RATS EXPOSED BY INGESTION AT LEVELS UP TO 250 MG/KG/DAY LIFETIME AND HAMSTERS EXPOSED VIA INHALATION TO CONCENTRATIONS UP TO 3500 PPM LIFETIME DID NOT SHOW AN INCREASED INCIDENCE OF TUMORS. 4.

EPIDEMIOLOGY STUDIES OF 751 HUMANS CHRONICALLY EXPOSED TO METHYLENE CHLORIDE IN THE WORKPLACE OF WHICH 252 WERE EXPOSED FOR A MINIMUM OF 20 YEARS DID NOT DEMONSTRATE ANY INCREASE IN DEATHS CAUSED BY CANCER OR CARDIAC PROBLEMS. A SECOND STUDY OF 2227 WORKERS CONFIRMED THESE RESULTS. 4.

MUTAGENICITY- METHYLENE CHLORIDE HAS BEEN EVALUATED FOR ITS POTENTIAL TO INDUCE GENOTOXIC EFFECTS BOTH IN VIVO AND IN VITRO SYSTEMS, WITH MIXED RESULTS. BASED ON THIS EVIDENCE, METHYLENE CHLORIDE MAY BE CONSIDERED A WEAK MUTAGEN IN MAMMALIAN SYSTEMS. 4.

REPRODUCTIVE TOXICITY- LABORATORY ANIMAL STUDIES ON MICE, RATS AND RABBITS HAVE BEEN CONDUCTED TO EVALUATE THE POTENTIAL REPRODUCTIVE AND DEVELOPMENTAL EFFECTS OF METHYLENE CHLORIDE EXPOSURES. METHLYENE CHLORIDE EXPOSURE HAS NOT BEEN SHOWN TO CAUSE TERATOGENIC EFFECTS (BIRTH DEFECTS) IN EXPERIMENTAL ANIMALS. 4.

PETROLEUM WAX
ALTHOUGH THIS SPECIFIC PRODUCT HAS NOT BEEN TESTED IN LABORATORY ANIMALS, NO ADVERSE HEALTH EFFECTS HAVE BEEN IDENTIFIED IN TOXICOLOGICAL TESTS USING SIMILAR HIGHLY REFINED PETROLEUM WAXES. 4.

METHANOL
ORL-RAT LD50: 5628 MG/KG 4.
IHL-RAT LC50: 64,000 MG/KG 4.
SKN-RBT LD50: 15,800 MG/KG 3.
SKN-RBT SDT: 20 MG/24H MODERATE 4.
EYE-RBT SDT: 40 MG MODERATE; 100 MG/24H MODERATE 4.

METHANOL SUBCHRONIC INHALATION STUDIES WITH LABORATORY ANIMALS (CONDUCTED AT APPROXIMATELY 30% OF THE LC50) HAS SHOWN SPECIFIC ABNORMALITIES TO THE CARDIOVASCULAR, MUSCULOSKELETAL AND UROGENITAL SYSTEMS OF THE DEVELOPING FETUS. REPORTED EFFECTS ALSO INCLUDED FETOTOXICITY. 4.

ISOPROPANOL
ORL-HMN LDLO: 3570 MG/KG 3.
ORL-RAT LD50: 5045 MG/KG 3.
IHL-RAT LC50: 16000 PPM/8H 3.
SKN-RBT LD50: 12800 MG/KG 3.
SKN-RBT SDT: 500 MG MILD 3.
EYE-RBT SDT: 10 MG MODERATE 3.

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES; AVOID TEMPERATURES ABOVE 100°F; DO NOT STORE IN FULL SUN.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ALKALIS, ACIDS, AMINES; REACTIVE POWDERED METALS SUCH AS POTASSIUM, LITHIUM, ZINC AND MAGNESIUM; SOME PLASTICS AND RUBBERS.

Hazardous Decomposition Products:
HYDROCHLORIC ACID, PHOSGENE GAS, HYDROGEN CHLORIDE, CHLORINE GAS AND OXIDES OF CARBON.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
WEAR APPROPRIATE PROTECTIVE CLOTHING. VENTILATE THE AREA. USE CARE AS SPILLS MAY BE SLIPPERY. DIKE AND CONTAIN SPILL. ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Neutralizing Agent:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN.

Eye Protection:
CHEMICAL GOGGLES SHOULD BE WORN WHEN HANDLING.

Other Protection:
WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: Heated:
Refrigerated:

Minimum Temperature: 35°F. Maximum Temperature: 100°F.

Precautions to be taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. IF STORED OUTSIDE, STORE CONTAINERS ON THEIR SIDE TO HELP PREVENT WATER ACCUMULATION ON A FLAT END AND CONSEQUENT PRODUCT CONTAMINATION. AVOID STORAGE IN FULL SUN.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
METHYLENE CHLORIDE	75-09-2	85
METHANOL	67-56-1	5

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE
INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.
4. VENDOR'S MSDS.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

** pH IS OBTAINED BY EXTRACTING BASE AND SOAP FROM PRODUCT AND SHAKING IN WATER.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE
CARC:CARCINOGENIC,
TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP,
PMCC:PENSKY-MARTIN CLOSED
CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT,
NFPA:NATIONAL FIRE
PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER,
NTP:NATIONAL
TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN

CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE,
PEL:PERMISSIBLE
EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE,
MUT:MUTAGENIC,
ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED,
SDT:STANDARD DRAIZE TEST,
ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET:DROP DEAD II AEROSOL

DATE OF ISSUE: 02/12/2001 **SUPERCEDES:** 02/04/2000

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:

N/A

Trade Name & Synonyms:

DROP DEAD II AEROSOL

Chemical Family:

AQUEOUS PERMETHRIN SOLUTION

Formula Mixture: X

Manufacturer's Name:

CHEMSEARCH DIV. OF NCH CORP.

Address:

BOX 152170

IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
C Williamson/Chemist	5414	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
HYDROTREATED LIGHT PETROLEUM DISTILLATE	IRRITANT	5 MG/M3$ 1	5 MG/M3$ 2	NOT EST.	64742-47-8
PROPANE	FLAM/ASPHX	2500 PPM 1	1000 PPM 2	NOT EST.	74-98-6
ISOBUTANE	FLAM/IRR	NOT EST. 1	NOT EST. 2	NOT EST.	75-28-5

$ OIL MIST VALUES

SECTION III - PHYSICAL DATA

Boiling Point (f):	212	**Specific Gravity (H20=1):**	0.97
Vapor Pressure (MM HG):	18	**Color:**	WHITE
Vapor Density (Air=1):	0.63	**Odor:**	MILD PETROLEUM
PH @ 100% :	6.0-8.0	**Clarity**	OPAQUE
% Volatile by Volume:	98.7	**Evaporation Rate (BU A/C=1):**	0.54
H20 Solubility:	APPRECIABLE	**Viscosity:**	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	Flammable Limits:	LEL:	UEL:
>200 F / SETAFLASH	ISOBUTANE	1.8%	9%

Extinguishing Media:

Foam:X Alcohol Foam:X CO2:X Dry Chemical:X Water Spray:X Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.

Unusual Fire and Explosion Hazards:

FIRE FIGHTING SHOULD BE DONE FROM UPWIND TO MINIMIZE POSSIBILITY OF EXPOSURE TO PESTICIDE, SMOKE AND FUMES. EVACUATE PEOPLE DOWNWIND AS APPROPRIATE. AEROSOL CANS CAN EXPLODE WHEN HEATED. FLAME EXTENSION IS 0 INCHES, BURNBACK IS 0 INCHES.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No **NTP:** No **OSHA:** No **ACGIH:** No **OTHER:** No

HYDROTREATED LIGHT PETROLEUM DISTILLATES (BASED ON SIMILAR COMPOUNDS)
ORL-RAT-LD50: >5000 MG/KG 3.
SKN-RBT-LD50: >2000 MG/KG 3.
PROPANE AND ISOBUTANE MIXTURE
NO APPARENT ILL EFFECTS IN BREATHING CONCENTRATIONS OF 5% FOR 2 HOURS. 4.
CAUSES DROWSINESS IN SHORT TIME IN CONCENTRATIONS OF 1%. 4.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: KEEP AWAY FROM EXCESSIVE HEAT, OPEN FLAME AND ANY SOURCE OF IGNITION. EXPOSURE TO TEMPERATURES ABOVE 130° F/64° C MAY CAUSE BURSTING.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE. REDUCING AGENTS SUCH AS ACIDS AND BASES.

Hazardous Decomposition Products:

OXIDES OF CARBON.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: NONE KNOWN.

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. IF RECYCLING IS NOT AVAILABLE, WRAP THE CONTAINER

REGULATIONS. IF RECYCLING IS NOT AVAILABLE, WRAP THE CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN TRASH. DO NOT INCINERATE OR PUNCTURE.

Neutralizing Agent:

NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:

SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:

NONE UNDER NORMAL CONDITIONS OF USE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:35°F Maximum Temperature:120°F

Precautions to be taken in Handling and Storing:

STORE IN A COOL, DRY AREA. DO NOT TRANSPORT OR STORE BELOW 32°F/O°C. DO NOT ALLOW PESTICIDE TO CONTAMINATE FOOD, FEED, OR NATURAL BODIES OF WATER. USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME. CONTENTS UNDER PRESSURE.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS. DO NOT APPLY THIS PRODUCT TO ENERGIZED ELECTRICAL EQUIPMENT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND
BIOLOGICAL EXPOSURE INDICES, ACGIH, 2000.
2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION,
RICHARD J. LEWIS, SR.
4. VENDOR'S MSDS.
ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE
CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED,
COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE
CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT,
NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR
THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN
CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT
VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT,
MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT,
PNOC: PARTICULATES NOT OTHERWISE CLASSIFIED, SDT:STANDARD DRAIZE TEST, ORL:
ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

Material Safety Data Sheet

B-12 Chemtool Carburetor Choke Cleaner **MSDS No. 068**

Date of Preparation: 09-10-01 Revision: 11-28-05

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: B-12 Chemtool Carburetor Choke Cleaner
Part Number: 0101, 0105, 0116, 0155 (Blend 1AA-MS)
CAS Number: Not Applicable to Mixtures
General Use: Automotive Product
Manufacturer: Berryman Products, Inc., 3800 E. Randol Mill Rd., Arlington, TX 76011-5434
Phone: 1-800-433-1704, Emergency phone number: 1-800-535-5053.

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt *or* % vol
Toluene	108-88-3	40-50
Methanol	67-56-4	20-30
Acetone	67-64-1	20-30
Methyl Ethyl Ketone	78-93-3	1-5
2-Butoxyethanol	111-76-2	1-5
Isopropanol	67-63-0	1-5
Mixed Xylenes	1330-20-7	1-5

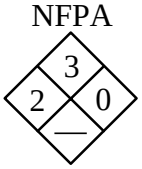
Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Toluene	200	none estab.	50	none estab.	none estab.	none estab.	none estab.
Methanol	200	none estab.	200	250	none estab.	none estab.	none estab.
Acetone	1000	none estab.	500	750	none estab.	none estab.	none estab.
Methyl Ethyl Ketone	200	none estab.	200	300	none estab.	none estab.	none estab.
2-Butoxyethanol	50	none estab.	20	none estab.	none estab.	none estab.	none estab.
Isopropanol	400	none estab.	400	500	none estab.	none estab.	none estab.
Mixed Xylenes	100	none estab.	100	150	none estab.	none estab.	none estab.

Section 3 - Physical and Chemical Properties

Physical State: Liquid
Appearance and Odor: Clear, Ketone
Vapor Density (Air=1): Heavier than air
Density: 6.97 lbs/gal
Specific Gravity (H_2O=1, at 4 °C): 0.835
Vapor Pressure (@68 °F): 21 mm/Hg (Major component)
Boiling Point: 122-378 °F
Refractive Index: 1.4187
% Volatile: 100
Evaporation Rate: Slower than ether

Section 4 - Fire-Fighting Measures



Flash Point: <40 °F
Flash Point Method: CC
LEL: 1.1% v/v (Major component)
Flammability Classification: Class IB
Extinguishing Media: Carbon dioxide, alcohol-resistant foam, dry chemicals
Unusual Fire or Explosion Hazards: Extremely flammable liquid. Vapors can cause flash fire.
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Wear self contained breathing apparatus pressure demand, MSNA/OSHA (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool.

Section 5 - Stability and Reactivity

Stability: B-12 Chemtool Carburetor Choke Cleaner is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities and Conditions to Avoid: Isolate from oxidizers, heat, sparks, electric equipment and open flame.
Hazardous Decomposition Products: Thermal oxidative decomposition of B-12 Chemtool Carburetor Choke Cleaner can produce carbon monoxide and carbon dioxide.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Skin, dermal, inhalation and ingestion.
Target Organs: Eyes, skin, respiratory system, CNS, liver and kidneys.
Acute Effects: May cause irritation to the eyes, skin, nose, throat and respiratory system. Nausea, headache, light-headedness, dizziness, abdominal pain, and dermatitis. May cause blindness if ingested. Harmful or fatal if swallowed.
Carcinogenicity: IARC, NTP, and OSHA do not list B-12 Chemtool Carburetor Choke Cleaner as a carcinogen.
Chronic Effects: May affect liver, kidneys or central nervous system. Can cause nervous system depression.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
Eye Contact: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
Skin Contact: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
Ingestion: GET MEDICAL ATTENTION IMMEDIATELY. Do not induce vomiting.
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 7 - Spill, Leak, and Disposal Procedures

Spill /Leak Procedures: Eliminate all sources of ignition. Stop spill at source. Wear appropriate personal protective equipment (Sec. 8). Contain the spill to facilitate cleanup with absorbent. Use non-sparking tools and equipment. Transfer to disposal containers.
Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.
Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state and local regulations.

Section 8 - Exposure Controls / Personal Protection

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.
Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.
Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Special Precautions and Comments

Handling Precautions: Avoid prolonged breathing of vapor and contact with eyes, skin and clothing. Use in well ventilated area. Wash thoroughly after handling.
Storage Requirements: Keep away from heat, sparks and flame. Keep container closed when not in use.

California Proposition 65: This product contains the following chemicals know to the state of California to cause cancer and/or reproductive toxicity: Toluene.

DOT Transportation Data (49 CFR 172.101):

Part Number(s): 0116
Shipping Name: Consumer Commodity
Hazard Class: ORM-D
ID No.: N/A
Packing Group: N/A

Part Number(s): 0101, 0105, 0155
Shipping Name: Flammable Liquids, N.O.S. contains (Toluene, Methanol)
Hazard Class: 3
ID No.: UN1993
Packing Group: II

SARA Title III Section 313 Supplier Notification:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the emergency Planning & Community Right-To-Know-Act of 1986 & of 40CFR 372: Toluene, Methanol, Methyl Ethyl Ketone, Mixed Xylenes, and Isopropanol.

Prepared By: Alicia L. Reed

Material Safety Data Sheet

B-12 Chemtool Injector Cleaner and Fuel Treatment **MSDS No. 016**

Date of Preparation: 10-29-99 Revision: 12-01-05

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: B-12 Chemtool Injector Cleaner Fuel Treatment
Part Number(s): 1112, 1115, 1165 (Blend 3A-5M)
CAS Number: Not applicable to mixtures
General Use: Automotive product
Manufacturer: Berryman Products, Inc., 3800 E. Randol Mill Rd., Arlington, TX 76011-5434
Phone: 1-800-433-1704, Emergency phone number: 1-800-535-5053.

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt *or* % vol
Mixed Xylenes	1330-20-7	50-60
Hydrocarbon Solvent	64475-85-0	30-35
Ethyl Benzene	100-41-4	5-15
N-Propanol	71-23-8	5-10

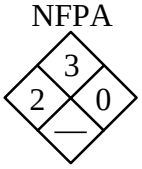
Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Mixed Xylenes	100	none estab.	100	150	none estab.	none estab.	none estab.
Hydrocarbon Solvent	500	none estab.	100	none estab.	none estab.	none estab.	none estab.
Ethyl Benzene	100	none estab.	100	125	none estab.	none estab.	none estab.
N-Propanol	200	none estab.	200	250	none estab.	none estab.	none estab.

Section 3 - Physical and Chemical Properties

Physical State: Liquid
Appearance and Odor: Clear, Colorless, Aromatic
Vapor Pressure: 9 mm Hg at 68 °F (Major Component)
Vapor Density (Air=1): Heavier than air
Density: 6.89 lbs/gal
Specific Gravity (H_2O=1, at 4 °C): 0.827
Boiling Point: 207-400 °F
Refractive Index: 1.4592
% Volatile: 99
Evaporation Rate: Slower than ether

Section 4 - Fire-Fighting Measures



Flash Point: 70 °F
Flash Point Method: CC
LEL: 1.1% v/v (Major Component)
Flammability Classification: Class IB
Extinguishing Media: Carbon dioxide, alcohol-like foam, dry chemicals
Unusual Fire or Explosion Hazards: Flammable liquid
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Wear self-contained breathing apparatus pressure demand, MSNA/OSHA (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool.

Section 5 - Stability and Reactivity

Stability: B-12 Chemtool Injector Cleaner Fuel Treatment is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities & Conditions to Avoid: Isolate from oxidizers, heat, sparks, electric equipment and open flame.

Hazardous Decomposition Products: Thermal oxidative decomposition of B-12 Chemtool Injector Cleaner Fuel Treatment can produce carbon monoxide, carbon dioxide and various hydrocarbons.

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes: Skin, dermal, inhalation and ingestion.
Target Organs: Eyes, skin, respiratory system, CNS, GI tract, blood, liver and kidneys.
Acute Effects: May cause irritation to the eyes, skin, nose, throat and respiratory system. Nausea, vomiting, abdominal pain, headache, light-headedness, dizziness, and dermatitis. Harmful or fatal if swallowed.
Carcinogenicity: IARC, NTP, and OSHA do not list B-12 Chemtool Injector Cleaner Fuel Treatment as a carcinogen.
Chronic Effects: May affect liver, kidneys, blood, GI tract or central nervous system. Can cause nervous system depression.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
Eye Contact: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
Skin Contact: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
Ingestion: GET MEDICAL ATTENTION IMMEDIATELY. Do not induce vomiting.
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 7 - Spill, Leak, and Disposal Procedures

Spill /Leak Procedures: Eliminate all sources of ignition. Stop spill at source. Wear appropriate personal protective equipment (Sec. 8). Contain the spill to facilitate cleanup with absorbent. Use non-sparking tools and equipment. Transfer to disposal containers.
Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.
Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state and local regulations.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 8 - Exposure Controls / Personal Protection

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.
Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.
Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Special Precautions and Comments

Handling Precautions: Avoid prolonged breathing of vapor and contact with eyes, skin and clothing. Use in well ventilated area. Wash thoroughly after handling.
Storage Requirements: Keep away from heat, sparks and flame. Keep container closed when not in use. Keep away from food.
California Proposition 65: This product contains the following chemicals know to the state of California to cause cancer and/or reproductive toxicity: None.

DOT Transportation Data (49 CFR 172.101):

Part Number(s): 1112
Shipping Name: Consumer Commodity
Hazard Class: ORM-D
ID No.: N/A
Packing Group: N/A

Part Number(s): 1115, 1165
Shipping Name: Flammable Liquid, N.O.S., contains (Xylene)
Hazard Class: 3
ID No.: UN 1993
Packing Group: II

SARA Title III Section 313 Supplier Notification:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the emergency Planning & Community Right-To-Know-Act of 1986 & of 40CFR 372: Mixed xylenes, Ethyl benzene.

Prepared By: Alicia L. Reed

Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name:	Carbon dioxide Liquid Carbon dioxide	**Trade Name:**	Carbon dioxide Liquid Carbon dioxide
Product Use:	Many		
Chemical Name:	Carbon dioxide	**Synonym:**	Carbon anhydride, Carbonic acid gas.
Chemical Formula:	CO_2	**Chemical Family:**	Acid anhydrides (Acid.)
Telephone:	**Emergencies:** * 1-800-363-0042	**Supplier /Manufacture:**	Praxair Canada Inc. 1 City Centre Drive Suite 1200 Mississauga, ON L5B 1M2
		Phone:	905-803-1600
		Fax:	905-803-1682

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier or Praxair sales representative.*

2. Hazards Identification

Emergency Overview

CAUTION! **High-pressure liquid and gas. Can cause rapid suffocation. Can increase respiration and heart rate. May cause nervous system damage. May cause frostbite. May cause dizziness and drowsiness. Self-contained breathing apparatus and protective clothing may be required by rescue workers. This product is a colourless, odourless gas at normal temperature and pressure. The gas is slightly acidic and may be felt to have a slight, pungent odour and biting taste.**

ROUTES OF EXPOSURE: Inhalation. Skin contact. Eye contact.

THRESHOLD LIMIT VALUE: TLV-TWA Data from 2007 Guide to Occupational Exposure Values (ACGIH). TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

INHALATION: Asphyxiant. Effects are due to lack of oxygen. Moderate concentrations may cause headaches, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconciousness. Lack of oxygen can kill.

SKIN CONTACT: No harm expected from vapour. Liquid may cause frostbite.

SKIN ABSORPTION: No harm expected. Liquid may cause frostbite.

SWALLOWING: This product is a gas at normal temperature and pressure. Liquid may cause frostbite.

EYE CONTACT: Vapour may cause a stinging sensation; liquid may cause frostbite.

EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:

No evidence of adverse effects from available information.

OTHER EFFECTS OF OVEREXPOSURE:

Damage to retial ganglion cells and central nervous system may occur.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

Repeated or prolonged exposure is not known to aggravate medical condition.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:

A single study has shown an increase in heart defects in rats exposed to 6% carbon dioxide in air for 24 hours at different time during gestation. There is no evidence that carbon dioxide is tetratogenic in humans.

CARCINOGENICITY:

Not listed as carcinogen by OSHA, NTP or IARC.

3. Composition and Information on Ingredients

COMPONENTS	CAS NUMBER	CONCENTRATION % by Mole
Carbon dioxide	124-38-9	100

4. First Aid Measures

INHALATION:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT:

For exposure to liquid, immediately warm frostbite area with warm water not to exceed 41 C. In case of massive exposure, remove contaminated clothing while showering with warm water. Call a physician.

SWALLOWING:

This product is a gas at normal temperature and pressure.

EYE CONTACT:

For contact with the liquid, immediately flush eyes throughly with warm water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. See a physician, preferably an ophthalmologist, immediately.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of over-exposure should be directed at the control of symptoms and the clinical condition.

5. Fire Fighting Measures

FLAMMABLE : No. **IF YES, UNDER WHAT CONDITIONS?** Not applicable.

EXTINGUISHING MEDIA:

This material cannot catch fire. Use media appropriate for surrounding fire.

PRODUCTS OF COMBUSTION:

Not applicable.

PROTECTION OF FIREFIGHTERS:

CAUTION! High-pressure gas. Asphxiant. Effects are due to lack of oxygen. Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk.

SPECIFIC PHYSICAL AND CHEMICAL HAZARDS:

Gas cannot catch fire. Container may rutpure due to heat of fire. No part of a container should be subjected to a temperature higher than 52 C. Most containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature.

SENSITIVITY TO IMPACT:

Avoid impact against container.

SENSITIVITY TO STATIC DISCHARGE:

Not applicable.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:

Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

FLAMMABLE LIMITS IN AIR, % by volume:

LOWER: Not applicable. **UPPER:** Not applicable.

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Personal Precautions:

CAUTION! **High-pressure gas.** Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off flow if you can do so without risk. Ventilate area or move cylinder to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

Environmental Precautions:

Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, provincial, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING:

Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. If valve is hard to open, discontinue use and contact your supplier. For other precautions, see section 16.

For additional information on storage and handling, refer to Compressed Gas Association (CGA) pamphlet P-1, *Safe Handling of Compressed Gases in Containers,* available from the CGA. Refer to section 16 for the address and phone number along with a list of other available publications.

PRECAUTIONS TO BE TAKEN IN STORAGE:

Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 52 C. Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE:

Extremely cold liquid and gas. Do not get liquid or vapours in eyes, on skin, or clothing. Safety showers and eyewash fountains should be immediately available. Use only in a closed system. Use piping and equipment adequately designed to withstand pressures to be encountered. ***Store and use with adequate ventilation at all times.*** Close valve after each use; keep closed even when empty. ***Prevent reverse flow.*** Reverse flow into cylinder may cause rupture. ***When returning cylinder to supplier,*** be sure valve is closed. ***Never work on a pressurized system.*** If there is a leak, close the cylinder valve. Vent the system down in a safe and environmentally sound manner in compliance with all federal, provincial, and local laws; then repair the leak. ***Never place a compressed gas cylinder where it may become part of an electrical circuit.***

RECOMMENDED PUBLICATIONS:

Additional information on storage, handling, and use of this product is provided in **NFPA 55: *Standard for the Storage, Use, and Handling of Compressed and Liquefied Gases in Portable Cylinders***, published by the National Fire Protection Association.

See also Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

8. Exposure Controls/Personal Protection

INGREDIENTS	CAS NUMBER	LD_{50} (Species & Routes)	LC_{50} (Rat, 4 hrs.)	Exposure Limits
Carbon dioxide	124-38-9	Not available.	Not available.	TWA: 5000 ppm 8 hours. STEL: 30000 ppm 15 minutes.

THRESHOLD LIMIT VALUE: TLV-TWA Data from 2007 Guide to Occupational Exposure Values (ACGIH). TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH):

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST: Preferred.

MECHANICAL (General): General exhaust ventilation may be acceptable if it can maintain an adequate supply of air.

SPECIAL: Not applicable.

OTHER: Not applicable.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Use air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below TLV. Select in accordance with the provincial regulations or guidelines. Selection should also be based on the current CSA standards Z94.4, "Selection, care and use of respirators". Respirators should be approved by NIOSH and MSHA.

SKIN PROTECTION: Insulated neoprene gloves.

EYE PROTECTION: Wear safety glasses when handling cylinders.

Select in accordance with the current CSA standard Z94.3, "Industrial Eye and Face Protection", and any provincial regulations, local bylaws or guidelines.

OTHER PROTECTIVE EQUIPMENT: Metatarsal shoes for cylinder handling. Protective clothing where needed. Cuffless trousers should be worn outside the shoes. Select in accordance with the current CSA standard Z195, "Protective Foot Wear", and any provincial regulations, local bylaws or guidelines.

9. Physical and Chemical Properties

PHYSICAL STATE:	Compressed Liquefied Gas.	**FREEZING POINT:**	Not applicable.	**pH:**	Not applicable.
BOILING POINT	Sublimation: -78.5 C	**VAPOUR PRESSURE**	5775.2 kPa (@ 20°C)	**MOLECULAR WEIGHT:**	44.01 g/mole
SPECIFIC GRAVITY: LIQUID (Water = 1)	Not applicable.	**SOLUBILITY IN WATER,**	Slight.		
SPECIFIC GRAVITY: VAPOUR (air = 1)	1.522g/ml @ 0 C	**EVAPORATION RATE** (Butyl Acetate=1):	>1 compared to (Butyl Acetate = 1)	**COEFFICIENT OF WATER/OIL DISTRIBUTION:**	Not applicable.
VAPOUR DENSITY:	0.00198 g/ml @ 0 C	**% VOLATILES BY VOLUME:**	100% (v/v).	**ODOUR THRESHOLD:**	Odourless.

APPEARANCE & ODOUR: Colourless. Odourless gas. It is felt by some to have a slight, pungent odour and biting taste.

10. Stability and Reactivity

STABILITY:	The product is stable.
CONDITIONS OF CHEMICAL INSTABILITY:	Not applicable.
INCOMPATIBILITY (materials to avoid):	Alkali metats, alkaline earth metals, metal acetylides, chromium, titanium above 550 C, uranium above 750 C.
HAZARDOUS DECOMPOSITION PRODUCTS:	In the presence of an electrical discharge, carbon dioxide is decomposed to form carbon monoxide and oxygen.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	None known.
CONDITIONS OF REACTIVITY:	None known.

11. Toxicological Information

ACUTE DOSE EFFECTS: See Section 2.

LC50 = 90,000 ppm, 5 min., human

STUDY RESULTS:

Carbon dioxide is an asphyxiant. It initially stimulates respiration and then causes respiratory depression. High concentrations result in narcosis. Symptoms in humans are as follows:

EFFECTS:	**CO_2 CONCENTRATION:**
Breathing rate increases slightly.	1%
Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness.	2%
Breathing increases to twice normal rate and become labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate.	3%
Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt.	4 - 5%
Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness.	5 - 10%
Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation.	50 - 100%

REPRODUCTIVE EFFECTS: A single study has shown an increase in heart defects in rats exposed to 6% carbon dioxide in air for 24 hours at differenc times during gestation. There is no evidence that carbon dixoide is tetragenic in humans.

12. Ecological Information

No adverse ecological effects expected. This product does not contain any Class I or Class II ozone-depleting chemicals. The components of this mixture are not listed as marine pollutants by TDG Regulations.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

14. Transport Information

TDG/IMO SHIPPING NAME: (Gas): Carbon dioxide; (Liquid): Carbon Dioxide, Refrigerated Liquid

HAZARD CLASS:	CLASS 2.2: Non-flammable, non-corrosive and non-poisonous gas.	**IDENTIFICATION #:**	UN1013 (Gas) UN2187 (Liquid)	**PRODUCT RQ:**	Any accidental release in a quantity that could pose a danger to public safety or any sustained release of 10 minutes or more.

SHIPPING LABEL(s):	Non-flammable, non-poisonous gas
PLACARD (When Required):	Non-flammable, non-poisonous gas

SPECIAL SHIPPING INFORMATION:

Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of vehicle can present serious safety hazards.

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, provincial, and local regulations. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS (Canada): CLASS A: Compressed gas.

This product is on the DSL list.

International Regulations:

EINECS: Not available.

DSCL (EEC): This product is not classified according to the EU regulations.

International Lists: No products were found.

16. Other Information

MIXTURES:

When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

HAZARD RATING SYSTEM:

HMIS RATINGS:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	3

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

THREADED:	CGA-320
PIN-INDEXED YOKE:	CGA-940
ULTRA-HIGH-INTEGRITY CONNECTION:	CGA-716

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlets V-1 and V-7 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information about this product can be found in the following pamphlets published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, Fax (703) 961-1831, website: www.cganet.com.

AV-1	Safe Handling and Storage of Compressed Gas
G-6	Carbon Dioxide
G-6.1	Standard for Low Pressure Carbon Dioxide Systems at Customer Sites
G-6.2	Commodity Specification for Carbon Dioxide
P-1	Safe Handling of Compressed Gases in Containers
P-14	Accident Prevention in Oxygen-Rich, Oxygen-Deficient Atmospheres
SB-2	Oxygen-Deficient Atmospheres
V-1	Compressed Gas Cylinder Valve Inlet and Outlet Connections
V-7	Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures
---	Handbook of Compressed Gases, Fourth Edition

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

PREPARATION INFORMATION:

DATE: **10/5/2007**
DEPARTMENT: **Safety and Environmental Services**
TELEPHONE: **905-803-1600**

The opinions expressed herein are those of qualified experts within Praxair Canada Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair Canada Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair Canada Inc. requests the users of this product to study this Material Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety nformation, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

Praxair Canada Inc.
1 City Centre Drive
Suite 1200
Mississauga, ON L5B 1M2

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Brakleen® Brake Parts Cleaner - Non-Chlorinated
Product Number (s): 05084, 05084-6

Manufactured By: CRC Industries, Inc. (215) 674-4300
885 Louis Drive, Warminster, PA 18974
24-Hour Emergency Information: CHEMTREC (800) 424-9300

Section 2: Composition/Information on Ingredients

Component	CAS NUMBER	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Toluene	108-88-3	100 ppm	100 ppm	NE	22-32
Methanol	67-56-1	200 ppm	200 ppm	NE	15-25
Acetone	67-64-1	750 ppm	750 ppm	NE	45-55
Carbon Dioxide	124-38-9	5000 ppm	10000 ppm	NE	< 10
Dimethoxypropane	77-76-9	NE	NE	NE	< 5

Section 3: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, water-white liquid.

Danger: Extremely Flammable. Vapor Harmful. Harmful or Fatal if Swallowed. May be fatal or cause blindness if swallowed Eye and skin irritant. Contents Under Pressure.

Potential Health Effects:

Inhalation: Dizziness, breathing difficulties, anesthetic effects, nausea and irritation to respiratory tract.
Eyes: Irritation
Skin: Irritation, defatting
Ingestion: NA

Carcinogenicity: OSHA: No IARC: No NTP: No
Chronic Overexposure: Contact dermatitis. Chronic overexposure may cause nervous system damage.
Medical Conditions Aggravated by Exposure: Breathing problems.

Section 4: First Aid Measures

Inhalation: Remove to fresh air. Give artificial respiration if necessary.

Eyes: Flush with large amounts of water for 15 minutes.

Skin: Remove contaminated clothing and wash area with soap and water.

Ingestion: Call a physician. Do not induce vomiting.

Section 5: Fire-Fighting Measures

Flashpoint:	< 0°F		Method:	TCC		LEL:	1.0	UEL:	13.0
Extinguishing Media:			CO_2, foam and fog						
Hazardous Combustion Products:			CO_2, carbon monoxide						
Fire-fighting Instructions:			Remove containers from fire area if possible. Use self-contained breathing apparatus for fire fighting. Aerosol cans may explode if heated above 120°F.						
NFPA:	Health:	2	Flammability:	3		Reactivity:	0		
HMIS:	Health:	2	Flammability:	3		Reactivity:	0	PPE:	B

Section 6: Accidental Release Measures

Spill/Leak Procedures: Usually not a problem with aerosols. Area should be ventilated. Absorbent should be used to pick up excess material. All used and unused product should be disposed of in accordance with federal, state and local regulations.

Section 7: Handling and Storage

Handling Procedures: Store in a cool, dry area. Aerosol cans must be maintained below 120°F to prevent cans from exploding.

Aerosol Level: III

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adequate to prevent accumulation of vapors. Use mechanical means if necessary to maintain levels below the exposure limits. If working in a confined space, follow applicable OSHA regulations.

Respiratory: Use NIOSH/MSHA compliant respirators or self-contained breathing apparatus above exposure limits. Follow OSHA regulations 29 CFR 1910.134.

Protective Clothing/Equipment: Wear chemically protective gloves and safety glasses. Use a splash apron and boots if splashing occurs.

Section 9: Physical & Chemical Properties

Physical State:	Liquid			Appearance & Odor:		Clear, water-white liquid	
Specific Gravity:	0.815			Boiling Point:		131°F (initial)	
Freezing Point:	ND			Vapor Pressure:		ND	
Evaporation Rate:	fast			Vapor Density (air = 1)		ND	
pH:	NA			Solubility:		Partially soluble in water. Soluble in most organic liquids.	
Volatile Organic Compounds %:	45	g/L:	366		lbs./gal:	3.0	

Section 10: Stability and Reactivity

Stability:	Stable	Hazardous Polymerization:	No
Chemical Incompatibilities:	Strong oxidizers.		
Materials to Avoid:	Strong oxidizing agents and sources of ignition.		

Hazardous Decomposition Products: None

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

Section 12: Ecological Information

Ecotoxicity: No data available.
Environmental Fate: No data available for biodegradation.

Section 13: Disposal Considerations

Disposal: This material if discarded may be hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state and local regulations. Contact your local or state environmental agency for specific rules. Do not dump into sewers, on the ground or into any body of water.

Section 14: Transportation Information

Shipping Name:	Consumer Commodity				
Hazard Class:	ORM-D	UN Number:	NA	Packing Group:	NA
Label:	NA	Placard:	NA		
Special Provisions:	NA				

Section 15: Regulatory Information

TSCA:	All components are either listed under TSCA or are exempt.	
SARA Title III:	Section 311/312:	Acute, Pressure, Fire
	Section 313*:	Toluene, Methanol
CERCLA/Superfund (RQ):		Mixture
Extremely Hazardous Substances:		No
California Prop 65:		This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

* See section 2 for percentage

Section 16: Additional Information

Prepared By:	Michelle Rudnick	Date:	November 16, 2005
Technical Information:	(800) 521-3168	CRC #:	594M-Q

This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
LEL:	Lower Explosive Limit	g/L:	grams per Liter
UEL:	Upper Explosive Limit	lbs./gal:	pounds per gallon
PPE:	Personal Protection Equipment	RQ:	Reportable Quantity
COC:	Cleveland Closed Cup		

MATERIAL SAFETY DATA SHEET:DS-67 PLUS AEROSOL

DATE OF ISSUE: 04/24/2000 **SUPERCEDES:** 06/10/1999

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
DS-67 PLUS AEROSOL

Chemical Family:
SOLVENT BLEND

Formula Mixture: X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
C WILLIAMSON/CHEMIST	5635	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
METHYLENE CHLORIDE	IRR/CARC 6	50 PPM 1	25 PPM 2	125 PPM	75-09-2
SYNTHETIC ISOPARAFFINIC HYDROCARBON	IRRITANT	400 PPM 1	NOT EST. 2	NOT EST.	64742-48-9
PROPYLENE GLYCOL MONOMETHYL ETHER	IRRITANT	100 PPM 1	100 PPM 2	150 PPM	107-98-2
TOLUENE	IRRITANT	50 PPM 1	200 PPM 2	150 PPM	108-88-3
MEDIUM ALIPHATIC SOLVENT NAPHTHA	IRRITANT	5 MG/M3 $1	5 MG/M3 $2	10 MG/M3 $	64742-88-7
PROPANE	ASPHYXIANT	NOT EST. 1	NOT EST. 2	NOT EST.	74-98-6
ISOBUTANE	IRRITANT	NOT EST. 1	1000 PPM 2	NOT EST.	75-28-5

$ OIL MIST VALUES

SECTION III - PHYSICAL DATA")%>

Boiling Point (f):	103	**Specific Gravity (H20=1):**	0.90
Vapor Pressure (MM HG):	340	**Color:**	COLORLESS
Vapor Density (Air=1):	> 1	**Odor:**	SWEET
PH @ 100% :	N/A	**Clarity**	TRANSPARENT
% Volatile by Volume:	100	**Evaporation Rate (BU A/C=1):**	< 1
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	Flammable Limits:	LEL:	UEL:
41 F / T.C.C.	NAPHTHA	0.9%	7.0%

Extinguishing Media:

Foam:X	Alcohol Foam:	CO2:X	Dry Chemical:X	Water Spray:	Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.

Unusual Fire and Explosion Hazards:
PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. FLAME EXTENSIONA: > 36 INCHES, BURNBACK: 6 INCHES. EXTREMELY FLAMMABLE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS TO PREVENT BURSTING.

Aerosol Level (NFPA 30B): 2

NFPA Hazard Rating: **(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Health:3	Flammability:3	Instability:0	Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute(Short Term Exposure)

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EYE CONTACT: CAUSES IRRITATION SEEN AS TEARING, REDNESS, BLURRED VISION, AND A BURNING SENSATION. PROLONGED CONTACT MAY CAUSE SEVERE IRRI- TAION AND TRANSIENT CORNEAL INJURY. SKIN CONTACT: CAUSES IRRITATION SEEN AS REDNESS, ITCHING AND A BURNING SENSATION. PROLONGED CONTACT CAN CAUSE SEVERE IRRITATION AND A BURNING SENSATION AND MAY CAUSE DEFATTING OF THE SKIN RESULTING IN DERMATITIS. INHALATION: AT LOW LEVELS OF CONCENTRATION, INITIAL SYMPTOMS MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA, LOSS OF CONCENTRATION AND IRRITATION. WITH HIGH EXPOSURE LEVELS, CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION), AND CARDIAC ARRHYTHMIA. INGESTION: MAY CAUSE GASTROINTESTINAL IRRITATION SEEN AS NAUSEA, VOMITING AND DIARRHEA. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. AVOID ALCOHOL CONSUMPTION.

-Chronic (Long Term Exposure)

EXCESSIVE EXPOSURE MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. TARGET ORGANS: CENTRAL NERVOUS SYSTEM, LIVER, KIDNEY, AND HEART. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS AND PRE-EXISTING LIVER AND KIDNEY DISEASES.

Primary Routes of Entry: Inhalation:X Ingestion: Absorption:

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes **NTP**: Yes **OSHA**: No **ACGIH**: No **OTHER**: No

METHYLENE CHLORIDE
ORL-RAT LD50: 1600 MG/KG 3.
SKN-RBT: 810 MG/24H SEV 3.
EYE-RAT: 162 MG MOD 3.
IHL-RAT LC50: 88,000 PPM 3.
METHYLENE CHLORIDE HAS BEEN SHOWN TO INCREASE THE RATE OF SPONTANEOUSLY OCCURING MALIGNANT TUMORS IN THE B6C3F1 MOUSE AND BENIGN TUMORS IN LABORATORY RATS. OTHER ANIMAL STUDIES, AS WELL AS SEVERAL HUMAN EPIDEMIOLOGY STUDIES, FAILED TO SHOW A TUMORIGENIC RESPONSE. 5.
A PROPORTIONATE MORTALITY STUDY SHOWED NO INCREASE IN DEATH FROM MALIGNANT NEOPLASMS AMONG WORKERS EXPOSED FOR UP TO 30 YEARS TO MEAN CONCENTRATIONS OF METHYLENE CHLORIDE RANGING FROM 33 PPM TO 118.8 PPM, WHEN COMPARED TO CONTROL POPULATIONS. 5.
HYDROTREATED HEAVY NAPHTHA
ORL-RAT LD50: > 5 G/KG 3.
SKN-RBT LD50: > 3.16 G/KG 3.
PROPYLENE GLYCOL MONOMETHYL ETHER
SKN-RBT: 500 MG OPEN MILD 3.
ORL-RAT LD50: 7510 MG/KG 3.
EYE-RBT 230 MG MILD 3.
IHL-RAT LCLO: 7000 PPM 3.
MEDIUM ALIPHATIC SOLVENT NAPHTHA
NO TOXICITY DATA AVAILABLE
PROPANE AND ISOBUTANE
NO TOXICITY DATA AVAILABLE
TOLUENE
EYE-HMN: 300 PPM 3.
IHL-MAN TCLO: 200 PPM:CNS 3.
ORL-RAT LD50: 5000 MG/KG 3.
SKN-RBT: 870 MG MILD 3.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

STRONG ALKALIS, ACIDS, AMINES, HYDROGEN PEROXIDE, STRONG OXIDIZER SUCH AS CHLORINE BLEACH, ALUMINUM, TIN, AND OTHER REACTIVE METALS

Hazardous Decomposition Products:

HYDROCHLORIC ACID, PHOSGENE GAS, HYDROGEN CHLORIDE, CHLORINE GAS, OXIDES OF CARBON AND HYDROGEN SULFIDE.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH.

Neutralizing Agent:

N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE BUILDUP OF MISTS OR VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN.

Eye Protection:

CHEMICAL GOGGLES SHOULD BE WORN. WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature: 35°F. Maximum Temperature:120°F.

Precautions to be taken in Handling and Storing:

USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
METHYLENE CHLORIDE	75-09-2	30
TOLUENE	108-88-3	20

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

MBiedermann

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1999. 2. OSHA PEL.
2. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR. 4. VENDOR'S MSDS. 5. IARC

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSEDCUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOC: PARTICULATES NOT OTHERWISE CLASSIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL: INHALATION

MBiedermann

MATERIAL SAFETY DATA SHEET:DURA-GARD AEROSOL

DATE OF ISSUE: 09/04/2001 **SUPERCEDES:** 07/18/1997

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:

N/A

Trade Name & Synonyms:

DURA-GARD AEROSOL

Chemical Family:

PETROLEUM HYDROCARBON/AMINE BLEND

Formula Mixture: X

Manufacturer's Name:

CHEMSEARCH DIV. OF NCH CORP.

Address:

BOX 152170

IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
C Williamson/Chemist	5014	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
HYDROTREATED LIGHT PETROLEUM DISTILLATES	COMB/IRR	100PPM 1	500PPM 2	N/E	64742-88-7
TALL OIL FATTY ACID	IRR/SENS	N/E 1	N/E 2	N/E	61790-12-3
MORPHOLINE	CORR/FLAM	20 PPM 1	20 PPM 2	N/E	110-91-8
HEAVY PARAFFINIC PETROLEUM DISTILLATES	IRRITANT	5 MG/M3 $1	5 MG/M3 $2	10MG/M3 $1	64742-54-7
ISOPROPANOL	FLAM/IRR	400PPM 1	400PPM 2	N/E	67-63-0
PROPANE	FLAM/ASPHY	2500PPM 1	1000PPM 2	N/E	74-98-6
N-BUTANE	FLAM/ASPHY	800PPM 1	N/E 2	N/E	106-97-6

$ OIL MIST VALUES

SECTION III - PHYSICAL DATA

Boiling Point (f):	320º	**Specific Gravity (H20=1):**	0.91
Vapor Pressure (MM HG):	30-45psi	**Color:**	YELLOW TO TAN
Vapor Density (Air=1):	1.8	**Odor:**	MORPHOLINE
PH @ 100% :	N/A	**Clarity**	OPAQUE
% Volatile by Volume:	50	**Evaporation Rate (BU A/C=1):**	0.08
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	Flammable Limits:	LEL:	UEL:
110ºF / SETAFLASH	PET DIST/ISOPROPANOL	0.6	12.7

Extinguishing Media:

Foam:X Alcohol Foam: CO2:X Dry Chemical:X Water Spray:X Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. FLAME EXTENSION > 18 INCHES AND BURNBACK = 5 INCHES.

IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No **NTP:** No **OSHA:** No **ACGIH:** No **OTHER:** No

HYDROTREATED LIGHT PETROLEUM DISTILLATES
IHL-RAT LD50: >700 PPM 4.
SKN-RBT LD50: >4 G/KG 4.
ORL-RAT LD50: >25 GM/KG 4.

TALL OIL FATTY ACID
EYES: MILD IRRITATION, EFFECTS REVERSIBLE IN LESS THAN 72 HOURS.* 4.
SKIN: MILD IRRITATION, EFFECTS REVERSIBLE IN LESS THAN 72 HOURS.* 4.
OLEIC ACID, A COMPONENT OF TALL OIL FATTY ACID, HAS BEEN SHOWN TO CAUSE CHROMOSOME ABERRATIONS IN YEAST (SACCHAROMYCES CEREVISAE) IN CULTURED HAMSTER FIBROBLAST CELLS. 4.
***TESTED L-5 PRODUCT (L-5 IS A GENERIC REPRESENTATIVE OF THIS PRODUCT.)**

MORPHOLINE
SKN-RBT SDT: 995 MG/24H SEVERE 3.
SKN-RBT OPEN: 500 MG MODERATE 3.
EYE-RBT SDT: 2 MG SEVERE 3.
ORL-RAT LD50: 1450 MG/KG 3.
IHL-RAT LC50: 8000 PPM/8H 3.
SKN-RBT LD50: 500 UL/KG 3.

HEAVY PARAFFINIC PETROLEUM DISTILLATES

ORL-HMN LDLo: 3570 MG/KG 3.
ORL-RAT LD50: 5045 MG/KG 3.
IHL-RAT LC50: 16000 PPM/8H 3.
SKN-RBT SDT: 500 MG MILD 3.
EYE-RBT SDT: 10 MG MODERATE 3.
ISOPROPANOL HAS BEEN SHOWN TO CAUSE HARM TO THE FETUS IN LABORATORY ANIMAL
STUDIES. HARM TO THE FETUS OCCURS ONLY AT EXPOSURE LEVELS THAT HARM THE
PREGNANT ANIMAL. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNCERTAIN.
OVEREXPOSURE TO THIS MATERIAL HAS BEEN FOUND TO CAUSE MILD, REVERSIBLE LIVER EFFECTS IN LABORATORY ANIMALS.

PROPANE
NO TOXICOLOGICAL DATA AVAILABLE

N-BUTANE
IHL-RAT LC50: 658 G/M3/4H 3.
IHL-MUS LC50: 680 G/M3/4H 3.

PROPANE/BUTANE MIXTURE
HUMAN VOLUNTEERS EXPOSED REPEATEDLY TO GASES OF SIMILAR HYDROCARON MIXTURES RANGING FROM 250 TO 1000 PPM EXHIBITED NO CARDIAC OR PULMONARY FUNCTION ABNORMALITIES. 4.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES. CONTACT WITH NITRITES CAN FORM CANCER-CAUSING NITROSOAMINES.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH, CONCENTRATED HYDROGEN PEROXIDE AND CHROMIC ACID; REDUCING AGENTS SUCH AS SODIUM THIOSULFATE; STRONG ACIDS, BASES, CHLORINATED COMPOUNDS, AMINES, ALKANOLAMINES, ALDEHYDES AND NITRITES.

Hazardous Decomposition Products:

OXIDES OF CARBON, NITROGEN AND SULFUR; AMMONIA, ALDEHYDES AND KETONES.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE

UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE CLOTHING, VENTILATE THE AREA, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN.

Eye Protection:

CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:32°F Maximum Temperature:120°F

Precautions to be taken in Handling and Storing:

DO NOT STORE NEAR HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.
4. VENDOR'S MSDS.
ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.
---------- IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

MATERIAL SAFETY DATA SHEET:LUBREASE AEROSOL

DATE OF ISSUE: 03/08/2001 **SUPERCEDES:** 08/23/1999

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A
Chemical Family:
PETROLEUM MIXTURE
Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.
Address:
BOX 152170
IRVING, TX 75015

Trade Name & Synonyms:
LUBREASE AEROSOL
Formula Mixture: X

Prepared By:	Product Code Number	Emergency Phone Number
L Boynton/Chemist	5033	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
PETROLATUM	IRRITANT	5 MG/M3$ 1	5 MG/M3$ 2	NOT EST.	8009-03-8
OIL-SOLUBLE SODIUM SULFONATE	IRRITANT	5 MG/M3$ 1	5 MG/M3$	NOT EST.	68608-26-4
HEXYLENE GLYCOL	IRRITANT	25 PPM$$ 1	NOT EST. 2	NOT EST.	107-41-5
STODDARD SOLVENT	IRRITANT	5 MG/M3$ 1	5 MG/M3$ 2	NOT EST.	8052-41-3
SEVERELY HYDROTREATED LIGHT NAPHTHENIC PTEROLEUM DISTILLATE	IRR/MUT	5 MG/M3$ 1	5 MG/M3$ 2	NOT EST.	64742-53-6
SEVERELY HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE	IRR/MUT	5 MG/M3$ 1	5 MG/M3$ 2	NOT EST.	64742-52-5
PROPANE	ASPHYXIANT	2500 PPM 1	1000 PPM 2	NOT EST.	74-98-6
ISOBUTANE	ASPHYXIANT	NOT EST. 1	NOT EST. 2	NOT EST.	75-28-5
POLYBUTENE POLYMER	IRRITANT	NOT EST. 1	NOT EST. 2	NOT EST.	9003-29-6

$ OIL MIST VALUES
$$ ACGIH STEL CEILING LIMIT

SECTION III - PHYSICAL DATA")%>

Boiling Point (f):	500	**Specific Gravity (H20=1):**	0.900
Vapor Pressure (MM HG):	< 0.05	**Color:**	BLACK
Vapor Density (Air=1):	10	**Odor:**	PETROLEUM
PH @ 100% :	N/A	**Clarity**	OPAQUE
% Volatile by Volume:	10	**Evaporation Rate (BU A/C=1):**	< 0.01
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	Flammable Limits:	LEL:	UEL:
>200 F / SETAFLASH	N-BUTANE	1.8	9.5

Extinguishing Media:

Foam:X Alcohol Foam:X CO2:X Dry Chemical:X Water Spray:X Other:X

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. DO NOT SPRAY A DIRECT STREAM OF WATER INTO PRODUCT AS FROTHING AND SPATTERING MAY OCCUR. FLAME EXTENSION: 10 INCHES, BURNBACK: 0 INCHES.

Aerosol Level (NFPA 30B): 2

NFPA Hazard Rating: **(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Health:2 Flammability:1 Instability:0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute(Short Term Exposure)

EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS TEARING, REDNESS, AND A BURNING SENSATION. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. MAY CAUSE ALLERGIC SKIN REACTION IN SENSITIVE INDIVIDUALS. INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. AT LOW VAPOR LEVELS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE HEADACHE, DIZZINESS, AND NAUSEA WITH POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION. INGESTION: CAUSES IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

-Chronic (Long Term Exposure)

MAY CAUSE SKIN SENSITIZATION IS SOME INDIVIDUALS. ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO OIL MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSITIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. TARGET ORGANS: LUNGS, LIVER, KIDNEYS, BLADDER AND CENTRAL NERVOUS SYSTEM.

Primary Routes of Entry: Inhalation: Ingestion: Absorption:X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No **NTP:** No **OSHA:** No **ACGIH:** No **OTHER:** No

PETROLATUM
SKN-RBT TDLo: 100 MG/KG/30D-I 3.
HEXYLENE GLYCOL
ORL-RAT LD50: 3700 MG/KG 3.
SKN-RBT SDT: 465 MG/24H 3.
EYE-RBT SDT: 93 MG/24H SEVERE 3.
SKN-RBT(OPEN): 465 MG MILD 3.
IHL-RAT LC50: NO DEATHS: 66 PPM/8H 4.
SKN-RBT LD50: 8560 UG/KG 3.
ORL-RAT LDLo: 33600 MG/KG/28D-I CHANGES IN LIVER, BLADDER, KIDNEY 3.
SEVERELY HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE
ORL-RAT LD50: 5 G/KG 3.
SKN-RBT LD50: 5 G/KG 3.
MUT: SALMONELLA TYPHIMURIUM: 10 UL/PLATE 3.
SEVERELY HYDROTREATED LIGHT NAPHTHENIC PETROLEUM DISTILLATE
ORL-RAT LD50: > 5 G/KG 3. SKN-RBT LD50: > 3.16 G/KG 3.
MUT: SALMONELLA TYPHIMURIUM: 10 UL/PLATE 3.
POLYBUTENE POLYMER
IHL-RAT TCLo: 700 MG/M3/7H/2W-I CHANGES IN LIVER WEIGHT 3.
ISOBUTANE
IHL-RAT LC50: 57 PPH/15M 3.
PROPANE
NO TOXICOLOGICAL DATA AVAILABLE
VOC CONTENT: 1.5 LBS/GAL (180 G/L)

OIL-SOLUBLE SODIUM SULFONATE
NO TOXICOLOGICAL DATA AVAILABLE
STODDARD SOLVENT
ORL-RAT LD50: > 5 G/KG 3.
SKN-RBT LD: > 3 G/KG 3.
SKN-RBT SDT: 500 MG/24H MODERATE 3.
IHL-RAT TCLo: 350 PPM/65D-I RENAL FAILURE 3.
SKN-RBT TDLo: 2 G/KG/4W-I DERMATITIS 3

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS

Hazardous Decomposition Products:

OXIDES OF CARBON, NITROGEN, SULFUR AND SODIUM.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. USE CARE AS SPILLS ARE SLIPPERY.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN BUILD UP MISTS OR VAPORS.

Respiratory Protection:

NONE REQUIRED UNDER NORMAL CONDITIONS OF USE.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN.

Eye Protection:

CHEMICAL GOGGLES SHOULD BE WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. AN EYEWASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:35 F Maximum Temperature:120 F

Precautions to be taken in Handling and Storing:

USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1999.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2000.
4. VENDOR'S MSDS.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSEDCUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOC: PARTICULATES NOT OTHERWISE CLASSIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL: INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

MATERIAL SAFETY DATA SHEET MAXI-LUBE RED

DATE OF ISSUE: 11/07/2001
SUPERCEDES: 10/23/2001

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
MAXI-LUBE RED

Chemical Family:
ALUMINUM COMPLEX/PETROLEUM HYDROCARBON BLEND

Formula Mixture:
X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By: C Williamson/Chemist
Product Code Number: 4566
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients):	SEVERELY HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE
Hazard:	IRRITANT
TLV:	5 MG/M3 $1
PEL:	5 MG/M3 $2
STEL:	10MG/M3 $1
CAS#:	64742-52-5
Chemical Name (Ingredients):	MINERAL OIL
Hazard:	OIL MIST
TLV:	5 MG/M3 $1
PEL:	5 MG/M3 $2
STEL:	10MG/M3 $1
CAS#:	8042-47-5
Chemical Name (Ingredients):	ANTIMONY DIALKYLDITHIOCARBAMATE
Hazard:	IRRITANT
TLV:	0.5MG/M3 1
PEL:	0.5MG/M3 2
STEL:	N/E
CAS#:	15890-25-2
Chemical Name (Ingredients):	PETROLEUM PROCESS OIL
Hazard:	IRRITANT
TLV:	5 MG/M3 $1
PEL:	5 MG/M3 $2
STEL:	10MG/M3 $1
CAS#:	64742-52-5
Chemical Name (Ingredients):	ALUMINUM BENZOATE FATTY ACID COMPLEX
Hazard:	IRRITANT
TLV:	N/E 1
PEL:	N/E 2
STEL:	N/E
CAS#:	82980-54-9

Chemical Name (Ingredients): $ OIL MIST VALUES
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION III - PHYSICAL DATA

Boiling Point (f):	625°
Specific Gravity (H20=1):	0.889
Vapor Pressure (MM HG):	<1
Color:	RED
Vapor Density (Air=1):	<1
Odor:	PETROLEUM
PH @ 100%:	N/A
Clarity:	TRANSLUCENT
Volatile by Volume:	NIL
Evaporation Rate (BU A/C=1):	<1
H20 Solubility:	NEGLIGIBLE
Viscosity:	VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: 500°F / C.O.C.
Flammable Limits: N/A LEL: N/A UEL:N/A

Extinguishing Media:
Foam: X Alcohol Foam: CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY.

Unusual Fire and Explosion Hazards:
USE CARE AS SPILLED MATERIAL IS SLIPPERY. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS IT FLOATS ON WATER. THE USE OF WATER SPRAY (FOG), WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE.

Aerosol Level (NFPA 30B): N/A
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 1 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
EYE CONTACT: NOT A HAZARD WITH NORMAL USE. DIRECT CONTACT WITH EYES MAY CAUSE IRRITATION SEEN AS TEARING AND REDNESS. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. INHALATION: NOT A HAZARD WITH NORMAL USE. INHALING EXCESSIVE AMOUNTS OF HEATED VAPORS CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING AND MAY CAUSE HEADACHE, DIZZINESS AND NAUSEA. INGESTION: NOT A HAZARD WITH NORMAL

USE. INGESTING LARGE QUANTITIES MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)

NO HUMAN CHRONIC DATA ARE AVAILABLE. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS. TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: Inhalation: Ingestion: Absorption:

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No NTP: No OSHA: No ACGIH: No
OTHER: No

SEVERELY HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATES
ORL-RAT LD50: > 5000 MG/KG 3.
SKN-RBT LD50: > 5000 MG/KG 3.
SKN-RBT SDT: 500 MG SEVERE 3.

MINERAL OIL
ORL-RAT TDLo: 92 G/KG/92D-C 3.

ANTIMONY DIALKYLDITHIOCARBAMATE
ORL-RAT LD50: 16400 MG/KG 4.
SKN-RBT LD50: 16000 MG/KG 4.

PETROLEUM PROCESS OIL
ORL-RAT LD50: >5000 MG/KG 3.
SKN-RBT LD50: >5000 MG/KG 3.
SKN-RBT SDT: 500 MG SEVERE 3.

ALUMINUM BENZOATE FATTY ACID COMPLEX
NO TOXICOLOGICAL DATA AVAILABLE

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID MIXING WITH INCOMPATIBLE GREASES.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; REDUCING AGENTS SUCH AS SODIUM THIOSULFATE AND BROMINE; STRONG ACIDS AND ALKALIES.

Hazardous Decomposition Products:
OXIDES OF CARBON, NITROGEN, SULFUR AND ANTIMONY; HYDROGEN SULFIDE, CARBON DISULFIDE AND VARIOUS ORGANIC COMPOUNDS SUCH AS KETONES, ALDEHYDES AND HYDROCARBONS.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
FOR LARGE SPILLS, SCOOP INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. FOR SMALL SPILLS, WIPE WITH A CLOTH AND TRANSFER ALL MATERIALS INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CARE AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Neutralizing Agent:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
GENERAL VENTILATION IS NORMALLY ADEQUATE.

Respiratory Protection:
NONE REQUIRED UNDER NORMAL CONDITIONS OF USE.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
NONE UNDER NORMAL CONDITIONS OF USE. SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
WEAR GENERAL DUTY WORK CLOTHING AND SHOES.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: X Heated:
Refrigerated:

Minimum Temperature: 25°F Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:
ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE CARTRIDGES IN AN UPRIGHT POSITION TO PREVENT OIL LEAKAGE.

EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT. DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS OR OPEN FLAME TO AVOID POSSIBLE EXPLOSION. FOR MAXIMUM PRODUCT LIFE, STORE INDOORS. OUTDOOR STORAGE TIP: STORE CONTAINERS ON THEIR SIDE TO HELP PREVENT WATER ACCUMULATION ON A FLAT END AND CONSEQUENT PRODUCT CONTAMINATION.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
ANTIMONY COMPOUNDS	15890-25-2	5%

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

CALIFORNIA PROPOSITION 65

WARNING: This product contains the following chemical(s) know to the State of California to cause (1)Cancer or (2)Birth Defects or other reproductive harm. THIS PRODUCT CONTAINSBENZENE(1&2), TOLUENE(2), ORTHO-TOLUIDINE (1) AND ANILINE (1) AS TRACE CONTAMINANTS.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.
4. VENDOR'S MSDS.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE
CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED,
COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP,
LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION

ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION
THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET: MET-KOOL AEROSOL

(000000-00-0000- -5035)

DATE OF ISSUE 8/20/2001

SUPERSEDES 8/19/1998

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms
N/A

Trade Name & Synonyms
MET-KOOL AEROSOL

(Chemical) Family:
PETROLEUM MIXTURE

Formula Mixture --> X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:
B Malkey/Chemist

Product Code Number
5035

Emergency Phone Number
800-424-9300

SECTION II - HAZARDOUS INGREDIENTS
THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
SEVERELY HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE	IRRITANT	5MG/M3$ 1.	5MG/M3$ 2.	10MG/M3 $1	64742-52-5
PROPANE	FLAM/ASPHY	2500 PPM 1	1000 PPM 2	NOT EST.	74-98-6
N-BUTANE	FLAM/ASPHY	800 PPM 1	NOT EST. 2	NOT EST.	75-28-5

$ OIL MIST VALUES

SECTION III - PHYSICAL DATA

Boiling Point (F):	465°	Specific Gravity (H2O=1):	0.89
Vapor Pressure (MM HG):	<0.01	Color:	LIGHT YELLOW
Vapor Density (Air=1):	>5	Odor:	PLEASANT
PH @ 100% :	N/A	Clarity:	TRANSPARENT
% Volatile by Volume:	<1	Evaporation Rate (BU A/C-1):	<0.01
H2O Solubility:	NEGLIGIBLE	Viscosity:	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point
>200 F. / SETAFLASH

Flammable Limits	LEL	UEL
PROPANE/N BUTANE BLEND	2.0	9.0

Extinguishing Media
X <--Foam <--Alcohol Foam X < CO2 X < Dry Chemical <--Water Spray <--Other

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. USE WATER TO COOL FIRE EXPOSED CONTAINERS TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:
VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. FLAME EXTENSION IS 6 INCHES. BURNBACK IS 24 INCHES.

Aerosol Level (NFPA 30B): 1

NFPA 704 Hazard Rating (0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
1 <--Health 1 <-- Flammability 0 < Instability < Special

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute (Short Term Exposure)

EYE CONTACT: MAY CAUSE IRRITATION SEEN AS TEARING AND REDNESS. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. INHALATION OF HIGH CONCENTRATIONS MAY CAUSE HEADACHE, DIZZINESS OR DISORIENTATION. INGESTION: INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)

PROLONGED OR REPEATED CONTACT MAY RESULT IN OIL ACNE, WHICH IS CHARACTERIZED BY BLACKHEADS WITH POSSIBLE SECONDARY INFECTION. LONG TERM REPEATED ORAL EXPOSURE MAY RESULT IN THE DEVELOPMENT OF PROGRESSIVE LIVER INJURY WITH FIBROSIS. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO OIL MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: X <--Inhalation <-- Ingestion <--Absorption

Emergency and First Aid Procedures:

SECTION V - HEALTH HAZARD DATA (Continued)

-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:
WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEATE MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:
INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:
IARC--> No NTP -> No OSHA--> No ACGIH--> No OTHER--> No

HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE
ORL-RAT LD50: >5 G/KG 3.
SKN-RBT LD50: >2 G/KG 3.

PROPANE
NO TOXICITY DATA AVAILABLE

N BUTANE
IHL RAT: 658 GM/M3/4H 3.

SECTION VII - REACTIVITY DATA

Stability: X <- Stable <--Unstable
Conditions to Avoid:
AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE.

Hazardous Decomposition Products:
OXIDES OF CARBON AND SULFUR, ALDEHYDES, ALKYL MERCAPTANS, HYDROGEN SULFIDE, HYDROGEN CHLORIDE AND CHLORINATED HYDROCARBONS.

Hazardous Polymerization: <- May Occur X <- Will Not Occur
Conditions to Avoid:
N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
DUE TO AEROSOL PACKAGING, LARGE SPILLS ARE UNLIKELY. FOR SMALL SPILLS, ABSORB WITH AN INERT MATERIAL AND TRANSFER TO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CAUTION AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:
NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
GENERAL VENTILATION IS NORMALLY ADEQUATE.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
NONE UNDER NORMAL CONDITIONS OF USE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors--> X Outdoors--> Heated -> Refrigerated-->
Minimum Temperature: 32 F. Maximum Temperature: 120 F.

Precautions to be Taken in Handling and Storing:
USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION X - STORAGE AND HANDLING INFORMATION (Continued)

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
NONE.		

Those ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer.
This MSDS is not intended for users in the state of California.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

MATERIAL SAFETY DATA SHEET REBOUND AEROSOL

DATE OF ISSUE: 02/14/2002
SUPERCEDES: 12/10/1998

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:	Trade Name & Synonyms:
N/A	REBOUND AEROSOL
Chemical Family:	**Formula Mixture:**
ALIPHATIC AND AROMATIC HYDROCARBONS	X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By: K Dickinson/Chemist
Product Code Number: 5536
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients):	TOLUENE
Hazard:	**
TLV:	50 PPM 1
PEL:	100 PPM 2
STEL:	NOT EST
CAS#:	108-88-3
Chemical Name (Ingredients):	ALIPHATIC PETROLEUM DISTILLATE
Hazard:	IRR/FLAM
TLV:	100 PPM $1
PEL:	500 PPM $2
STEL:	NOT EST
CAS#:	64742-89-8
Chemical Name (Ingredients):	PROPANE
Hazard:	FLAM/ASPHX
TLV:	2500 PPM 1
PEL:	NOT EST 2
STEL:	NOT EST
CAS#:	74-98-6
Chemical Name (Ingredients):	BUTANE
Hazard:	FLAM/ASPHX
TLV:	800 PPM 1
PEL:	NOT EST 2
STEL:	NOT EST
CAS#:	106-97-8
Chemical Name (Ingredients):	CALCIUM CARBONATE
Hazard:	IRRITANT
TLV:	10 MG/M3 1
PEL:	5 MG/M3 *2
STEL:	NOT EST
CAS#:	1317-65-3
Chemical Name (Ingredients):	PETROLEUM ASPHALT
Hazard:	IRRITANT
TLV:	NOT EST 1
PEL:	NOT EST 2
STEL:	NOT EST
CAS#:	8052-42-4

Chemical Name (Ingredients):	HYDROUS ALUMINUM SILICATE
Hazard:	IRRITANT
TLV:	NOT EST 1
PEL:	NOT EST 2
STEL:	NOT EST
CAS#:	1332-58-7

Chemical Name (Ingredients):	HYDRATED ALUMINUM MAGNESIUM SILICATE
Hazard:	IRRITANT
TLV:	NOT EST 1
PEL:	NOT EST 2
STEL:	NOT EST
CAS#:	12174-11-7

Chemical Name (Ingredients):	CRYSTALLINE SILICA (QUARTZ)
Hazard:	IRR/CARC
TLV:	.05MG/M3 1
PEL:	3.3MG/M3 2
STEL:	NOT EST
CAS#:	14808-60-7

Chemical Name (Ingredients):	$ STODDARD SOLVENT VALUE
Hazard:	
TLV:	
PEL:	
STEL:	
CAS#:	

Chemical Name (Ingredients):	* RESPIRABLE FRACTION
Hazard:	
TLV:	
PEL:	
STEL:	
CAS#:	

Chemical Name (Ingredients):	** IRR/FLAM/SL.TOX.
Hazard:	
TLV:	
PEL:	
STEL:	
CAS#:	

SECTION III - PHYSICAL DATA

Boiling Point (f):	>50
Specific Gravity (H20=1):	0.7
Vapor Pressure (MM HG):	68 PSIG
Color:	DARK BROWN-BLACK
Vapor Density (Air=1):	>1
Odor:	SOLVENT
PH @ 100%:	N/A
Clarity:	OPAQUE
Volatile by Volume:	72
Evaporation Rate (BU A/C=1):	<1
H20 Solubility:	NEGLIGIBLE
Viscosity:	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: 35°F / SETAFLASH
Flammable Limits: ALI.PET.DIST./PROPANE LEL: 0.7% UEL:9.5%

Extinguishing Media:
Foam: X Alcohol Foam: CO2: X
Dry Chemical: X Water Spray: Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:
VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. FLAME EXTENSION IS >30 INCHES, BURNBACK IS 2 INCHES.

Aerosol Level (NFPA 30B): 3
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 2 Flammability: 4 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. MAY CAUSE DEFATTING OF THE SKIN.
EYE CONTACT: CAUSES IRRITATION SEEN AS REDNESS AND TEARING.
INHALATION: AT LOW LEVELS OF CONCENTRATION, INITIAL SYMPTOMS MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONCENTRATION. WITH HIGH EXPOSURE LEVELS, CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION),CARDIAC ARRHYTHMIA AND ANESTHETIC EFFECTS MAY OCCUR. PRODUCT VAPORS DISPLACE AIR AND CAN CAUSE ASPHYXIATION, ESPECIALLY IN CONFINED SPACES.
INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)
A CONDITION KNOWN AS "PAINTER'S SYNDROME" CAN OCCUR CAUSING A LOSS OF SENSATION IN THE ARMS AND HANDS (PERIPHERAL NEUROPATHY). INHALATION OF CRYSTALLINE SILICA CAN CAUSE A PROGRESSIVE LUNG DISEASE KNOWN AS SILICOSIS. STUDIES INDICATE THAT PERSONS DIAGNOSED WITH SILICOSIS HAVE AN INCREASED RISK OF LUNG CANCER.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS AND PRE-EXISTING LIVER AND KIDNEY DISEASES.
TARGET ORGANS: LIVER, HEART, LUNGS, CENTRAL AND PERIPHERAL NERVOUS SYSTEMS AND KIDNEYS.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption:

Emergency and First Aid Procedures:
-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:
WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:
THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:
IARC: Yes NTP: No OSHA: No ACGIH: No
OTHER: No

TOLUENE
EYE-HMN-SDT: 300 PPM 3.
SKN-RBT-SDT: 500 MG MODERATE 3.
SKN-RBT LD50: 12124 MG/KG 4.
IHL-RAT LC50: 49 GM/M3/4H 3.
ORL-RAT LD50: 636 MG/KG 3.

REPEATED ORAL ADMINISTRATION PRODUCED LIVER, KIDNEY AND BLOOD CHANGES IN RATS. INHALATION EXPOSURE PRODUCED LUNG IRRITATION AND DAMAGE IN RATS, BLOOD CHANGES IN RATS AND MICE, LIVER CHANGES IN RATS, MICE AND RABBITS, DECREASED RESISTANCE TO LUNG INFECTION IN MICE AND VARIOUS BRAIN EFFECTS INCLUDING SUBTLE BEHAVIOR CHANGES AND HEARING LOSS IN RATS AND MICE. 4.

ALIPHATIC PETROLEUM DISTILLATE
ORL-RAT LD50: >5840 MG/KG 3.
SKN-RAT LD50: >2920 MG/KG 3.
SKN-RBT: 4HR; SLIGHT IRRITATION 3.
EYE-RBT: NEGLIGIBLE IRRITATION 3.
IHL-RAT LC50: 3400 PPM 3.

KIDNEY EFFECTS IN MALE RATS WERE OBSERVED IN LABORATORY ANIMALS EXPOSED TO A SIMILAR MATERIAL. EFFECTS WERE CONSISTENT WITH MALE RATS HYALINE DROPLET NEPHROPATHY WHICH IS OF QUESTIONABLE SIGNIFICANCE TO HUMAN HEALTH. IN ANIMALS, REPEATED EXPOSURE TO HIGH CONCENTRATIONS OF A SIMILAR SOLVENT HAS CAUSED A DECREASE IN THE RED BLOOD CELL COUNT. 3.

PROPANE
NO TOXICOLOGICAL DATA AVAILABLE.

BUTANE
IHL-RAT LC50: 658 G/M3/4H 3.
IHL-MUS LC50: 680 G/M3/4H 3.

CALCIUM CARBONATE
ORL-RAT LD50: 6450 MG/KG 5.
EYE, NOSE, THROAT AND RESPIRATORY IRRITANT 6.

PETROLEUM ASPHALT
NO TOXICOLOGICAL DATA AVAILABLE.

HYDRATED ALUMINUM MAGNESIUM SILICATE
IPR-RAT TDLo: 338 MG/KG/2W-I NEO 3.

HYDROUS ALUMINUM SILICATE (DATA FROM SIMILAR COMPOUND)
ORL-RAT LD50: >27 GM/KG 3.
IHL-RAT LC: >140 MG/M3/4H 3.
SKN-RBT LD: >2 GM/KG 3.

CRYSTALLINE SILICA
CRYSTALLINE SILICA (QUARTZ)
IHL-HMN LCLo: 16 MPPCF/8H/17.9Y-I FIBROSIS OF THE LUNG 3.
IHL-RAT LCLo: 80 MG/M3/26W-I FIBROSIS OF THE LUNG 3.
TUMORIGENICITY
IHL-RAT TCLo: 50 MG/M3/6H/71W-I TUMORS 3.

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER HAS CONCLUDED THAT "CRYSTALLINE SILICA INHALED IN THE FORM OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES IS CARCINOGENIC TO HUMANS (GROUP 1)". IT ALSO NOTED THAT CARCINOGENICITY WAS NOT DETECTED IN ALL INDUSTRIAL CIRCUMSTANCE STUDIES, AND MAY BE DEPENDENT ON EXTERNAL FACTORS AFFECTING ITS BIOLOGICAL ACTIVITY OR DISTRIBUTION OF ITS POLYMORPHS. EXPOSURE TO RESPIRABLE SILICA HAS ALSO BEEN ASSOCIATED WITH SILICOSIS, SCLERODERMA AND NEPHROTOXICITY. 4.

VOC CONTENT: 72% OR 4.1 LB/GAL

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE AND STRONG ACIDS.

Hazardous Decomposition Products:
OXIDES OF CARBON AND SULFUR AND HYDROCARBONS.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A.

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
ELIMINATE ALL SOURCES OF IGNITION. DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WIPE UP AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:
NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL.

Glove Protection:
NEOPRENE RUBBER OR NITRILE GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: Heated:
Refrigerated:

Minimum Temperature: 32 F Maximum Temperature: 120 F

Precautions to be taken in Handling and Storing:
USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
TOLUENE	108-88-3	40

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.
4. VENDOR'S MSDS.
5. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, NINTH EDITION, RICHARD J. LEWIS, SR.
6. HAZARDOUS MATERIALS TOXICOLOGY - CLINICAL PRINCIPLES OF ENVIRONMENTAL HEALTH, WILLIAM AND WILKINS, 1992.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET:SILA-CHEM PLUS AEROSOL

DATE OF ISSUE: 11/21/2000 **SUPERCEDES:** 09/12/2000

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
SILA-CHEM PLUS AEROSOL

Chemical Family:
CHLOROFLUOROCARBON/SILICONE BLEND

Formula Mixture: X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
L Boynton/Chemist	5207	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
DICHLOROFLUOROETHANE	IRRITANT	NOT EST. 1	NOT EST. 2	NOT EST.	1717-00-6
CARBON DIOXIDE	ASPHYXIANT	5000 PPM 1	5000 PPM 2	NOT EST.	124-38-9

SECTION III - PHYSICAL DATA

Boiling Point (f):	90	**Specific Gravity (H20=1):**	1.25
Vapor Pressure (MM HG):	593	**Color:**	COLORLESS
Vapor Density (Air=1):	4.0	**Odor:**	CHLOROFORM
PH @ 100% :	N/A	**Clarity**	TRANSPARENT
% Volatile by Volume:	93.5	**Evaporation Rate (BU A/C=1):**	1.2
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	Flammable Limits:	LEL:	UEL:
> 200 F. / SETAFLASH	DICHLOROFLUOROETHANE	7.6%	17.7%

Extinguishing Media:

Foam:X Alcohol Foam:X CO2:X Dry Chemical:X Water Spray:X Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. SPRAY EXPOSED AEROSOL CONTAINERS WITH WATER TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

HYDROFLUORIC AND HYDROCHLORIC ACIDS AND PHOSGENE CAN FORM UNDER CONDITIONS OF INTENSE HEAT. THIS PRODUCT WILL NOT IGNITE OR BURN IN OPEN AIR. HOWEVER, IT IS POSSIBLE FOR THE VAPORS TO IGNITE IF TRAPPED IN A CONFINED AREA WHEN EXPOSED TO A SOURCE OF IGNITION. VAPORS ARE ALSO HEAVIER THAN AIR AND CAN TRAVEL TO AND IGNITE AT DISTANT LOCATIONS.

Aerosol Level (NFPA 30B): 1

NFPA Hazard Rating: **(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Health:1 Flammability:1 Instability:0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

5000 PPM AS CARBON DIOXIDE 1.

Effects of Overexposure:

-Acute(Short Term Exposure)

EYE CONTACT: CAUSES IRRITATION SEEN AS TEARING AND REDNESS. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. DIRECT EXPOSURE TO THE LIQUID CAN CAUSE FROSTBITE DUE TO ITS RAPID EVAPORATION. INHALATION: AT LOW LEVELS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE HEADACHE, DIZZINESS, AND NAUSEA WITH POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION. AS VAPORS IN THIS PRODUCT ARE HEAVIER THAN AIR, IT CAN CAUSE ASPHYXIATION IF USED IN A CONFINED SPACE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE VAPORS CAN BE HARMFUL OR FATAL. INGESTION: MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, WEAKNESS, STAGGERING GAIT, NAUSEA, BLURRED VISION, EXCITATION AND IN EXTREME CASES COMA OR DEATH.

-Chronic (Long Term Exposure)

REPEATED OVEREXPOSURE CAN SENSITIZE THE HEART TO EPINEPHRINE WHICH MAY CAUSE CARDIAC ARRHYTHMIA (IRREGULAR HEARTBEAT). THIS DEGREE OF EXPOSURE IS UNLIKELY WITH AN AEROSOL UNLESS INTENTIONALLY AND REPEATEDLY INHALED. THE ACUTE EFFECTS PREVIOUSLY LISTED WOULD BE EVIDENT WELL BELOW THE LEVEL. TARGET ORGANS: CENTRAL NERVOUS SYSTEM AND HEART. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS AS WELL AS PRE-EXISTING CARDIAC DISEASES.

Primary Routes of Entry: Inhalation:X Ingestion: Absorption:

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY. DO NOT GIVE ADRENALIN.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No **NTP:** No **OSHA:** No **ACGIH:** No **OTHER:** No

DICHLOROFLUOROETHANE
ORL-RAT LD50: < 5 G/KG 3.
IHL-RAT LC50: 56,700 PPM/6H 3.
IHL-RAT TCLo: 50 G/M3/4H/4W-I THYROID HYPOFUNCTION 3.
CARDIAC ARRYTHMIA THRESHOLD-10,000 PPM 4.
SKN-RBT LD50: > 2 G/KG 3.

CARBON DIOXIDE
IHL-RBT TCLo: 27,000 PPM/24H/30D-C SOMNOLENCE 3.
IHL-HMN LCLo: 9 PPH/5M 3.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

REACTIVE METALS (I.E.POWDERED ALUMINUM, ZINC), STRONG OXIDIZERS LIKE SODIUM HYPOCHLORITE, SOME

DESSICANTS, SENSITIVE PLASTICS SUCH AS ACRYLIC, POLYSTYRENE, POLYCARBONATE (LEXAN), ABS, CELLULOSE ACECATE, POLYETHYLENE-TEREPHTHALATE AND POLYVINYL CHLORIDE (CLEAR COMPOUNDS).

Hazardous Decomposition Products:

HYDROCHLORIC AND HYDROFLUORIC ACIDS, CARBONYL HALIDES SUCH AS AS PHOSGENE, OXIDES OF CARBON AND FORMALDEHDYE.

Hazardous Polymerization: May Occur:X Will Not Occur:

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. USE CARE AS SPILLS ARE SLIPPERY. IT MAY BE NECESSARY TO USE A NON-POLAR SOLVENT SUCH AS KEROSENE IN ORDER TO REMOVE SILICONE RESIDUES FROM SURFACES.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

GENERAL EXHAUST IS USUALLY ADEQUATE. LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN ALLOW A BUILDUP OF VAPORS.

Respiratory Protection:

NONE REQUIRED UNDER NORMAL CONDITIONS OF USE. A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:

SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:

N/A

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:35°F. Maximum Temperature:120°F.

Precautions to be taken in Handling and Storing:

USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
DICHLOROFLUOROETHANE	1717-00-6	95

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1999. 2. OSHA PEL.
3 REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2000.
4. VENDOR'S MSDS.
ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSEDCUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOC: PARTICULATES NOT OTHERWISE CLASSI-FIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL: INHALATION MUT:MUTAGENIC, ASPHYX:ASPHYXIANT

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

MATERIAL SAFETY DATA SHEET SUPER CHEMSOLV AEROSOL

DATE OF ISSUE: 06/27/2002
SUPERCEDES: 06/27/2002

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
SUPER CHEMSOLV AEROSOL

Chemical Family:
ALKYL BROMIDE

Formula Mixture:
X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By: C Williamson/Chemist
Product Code Number: 5088
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): N-PROPYL BROMIDE
Hazard: IRRITANT
TLV: 100 PPM 3
PEL: N/E 2
STEL: N/E
CAS#: 106-94-5

Chemical Name (Ingredients): ISOPROPANOL
Hazard: IRRITANT
TLV: 400 PPM 1
PEL: 400 PPM 2
STEL: 500 PPM 1
CAS#: 67-63-0

Chemical Name (Ingredients): CARBON DIOXIDE
Hazard: ASPHYX
TLV: 5000 PPM 1
PEL: 5000 PPM 2
STEL: N/E
CAS#: 124-38-9

SECTION III - PHYSICAL DATA

Boiling Point (f): 160°
Specific Gravity (H20=1): 1.34-1.36
Vapor Pressure (MM HG): 110.8
Color: COLORLESS

Vapor Density (Air=1):	4.27
Odor:	SWEET
PH @ 100%:	N/A
Clarity:	TRANSPARENT
Volatile by Volume:	100
Evaporation Rate (BU A/C=1):	10.10
H20 Solubility:	NEGLIGIBLE
Viscosity:	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200°F / T.C.C.
Flammable Limits: ISOPROPANOL LEL: 2.0% UEL:12.7%

Extinguishing Media:
Foam: X Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.

Unusual Fire and Explosion Hazards:
USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS TO PREVENT BURSTING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. FLAME EXTENSION IS 0 INCHES, BURNBACK IS 0 INCHES.

Aerosol Level (NFPA 30B): 1
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 2 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. EXPOSURE TO HIGH CONCENTRATIONS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION SEEN AS HEADACHES, DIZZINESS, ATAXIA AND ANESTHESIA.
INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.
EYE CONTACT: MAY CAUSE IRRITATION SEEN AS TEARING AND REDNESS.
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. PRODUCT MAY BE ABSORBED THROUGH INTACT SKIN WITH EFFECTS SIMILAR TO INHALATION.

-Chronic (Long Term Exposure)
EXPOSURE TO HIGH DOSES MAY CAUSE LIVER, LUNG AND KIDNEY EFFECTS.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS.

TARGET ORGANS: CENTRAL AND PERIPHERAL NERVOUS SYSTEMS, HEART, LIVER, LUNGS, KIDNEYS AND TESTES.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption: X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No NTP: No OSHA: No ACGIH: No

OTHER: No

VOC: 96.7% BY WEIGHT

N-PROPYL BROMIDE

SKN-RAT LD50: >2 G/KG 6.

ORL-RAT LD50: 4260 MG/KG 3.

IHL-RAT LC50: 25300 MG/M3/0.5 HR 3.

IHL-RAT LC50: 35000 MG/M3/4 HR 5.

THE OVERAL CONCLUSION FROM ANIMAL DATA IS THAT THE MOST SENSITIVE ENDPOINT OF TOXICITY IS PERIPHERAL/CENTRAL NEUROTOXICITY FOLLOWED BY REPRODUCTIVE TOXICITY, LIVER TOXICITY, HEMATOPOIETIC TOXICITY AND CNS PATHOLOGY WITH THE POSSIBILITY OF CARDIAC AND KIDNEY EFFECTS AT NEARLY LETHAL DOSES. HUMAN STUDIES SUGGEST INCREASED INCIDENCE OF HEADACHES, HEMATOPOIETIC EFFECTS AS WELL AS REPRODUCTIVE TOXICITY EFFECT AMONG AFFECTED WORKERS. 7.

ISOPROPANOL

ORL-HMN LDLo: 3570 MG/KG 4.

ORL-RAT LD50: 5500 MG/KG 3.

SKN-RBT LD50: 12000 MG/KG 3.
SKN-RBT SDT: 500 MG MILD 4.
EYE-RBT SDT: 10 MG MODERATE 4.
IHL-RAT LC50: 16000 PPM/8H 4.

CARBON DIOXIDE
IHL-RAT TCLo: 10000 PPM/24(S)-30 DAY(S) CONTINUOUS 3.
IHL-HMN LCLo: 9PPM/5M 3.

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS, STRONG BASES, RUBBER, SOME PAINTS AND PLASTICS.

Hazardous Decomposition Products:
OXIDES OF CARBON AND HYDROGEN BROMIDE.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
DUE TO THE NATURE OF THE PACKAGING, A LARGE SPILL IS UNLIKELY. PICK UP SPILLED MATERIAL WITH A CLOTH OR SUITABLE ABSORBANT AND DISPOSE OF PROPERLY.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
WEAR GENERAL-DUTY WORK CLOTHING AND SHOES.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: X Heated:
Refrigerated:

Minimum Temperature: 32°F Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:
USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. VENDOR'S MSDS.
4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.
5. INSTITUT NATIONAL DE L'ENVIRONMENT INDUSTRIAL ET DES RESQUES, FINAL REPORT (INERISL.E.T.E. STUDY NUMBER 95 122) (1997).
6. CENTRE INTERNATIONAL DE TOXICOLOGIE, ACUTE DERMAL TOXICITY IN RATS (LABORATORY STUDY NUMBER 13113 TAR) (1995).
7. DERIVATION OF AN OCCUPATIONAL EXPOSURE LIMIT FOR N-PROPYL BROMIDE, JOHN DOULL, PH.D., M.D. & KARL K. ROZMAN, PH.D., D.A.B.T., 2001.
ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY. -----

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IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM

EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL:INHALATION, HMN:HUMAN
THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET

DATE PRINTED: 3/16/2005
Janice

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

MANUFACTURERS NAME
W.M. BARR & COMPANY, INC.

ADDRESS
2105 Channel Ave.
Memphis, TN 38113 USA

EMERGENCY TELEPHONE #1
901-775-0100

EMERGENCY CONTACT
W.M. Barr Technical Services

EMERGENCY INFORMATION
"3E" 24 HOUR MEDICAL EMERGENCY #, 800 451-8346.
SEE SECTION 5 FOR ADDITIONAL EMERGENCY INFORMATION

INVENTORY ITEM #
GSL26

PRODUCT NAME
KS DENATURED ALCOHOL 1 GL

REVISED BY
W.M. Barr Technical Services

REVISION DATE
1/21/2005

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#	CARCINOGENICITY NTP	ACGIH	OSHA	IARC
DENATURED ALCOHOL	45- 50	N/A	N	N	N	N
** ABOVE INGREDIENT CONSISTS OF THE FOLLOWING **						
ETHANOL	85- 90	64-17-5	N	N	N	N
METHANOL	1- 4	67-56-1	N	N	N	N
METHYL ISOBUTYL KETONE	1- 5	108-10-1	N	N	N	N
METHANOL	45- 50	67-56-1	N	N	N	N

SECTION 3. REGULATORY INFORMATION

EXPOSURE LIMITS/REGULATORY INFORMATION

SUBSTANCE DESCRIPTION	REG.AGCY	U/M	TWA	STEL	CEIL	SKIN	PEL
DENATURED ALCOHOL	ACGIH	PPM	N/E	N/E	N/E	N	N/E
	OSHA	PPM	N/E	N/E	N/E	N	N/E
ETHANOL	ACGIH	PPM	1000.00	N/E	N/E	N	N/E
	OSHA	PPM	1000.00	N/E	N/E	N	1000.00
METHANOL	ACGIH	PPM	200.00	250.00	N/E	Y	N/E
	OSHA	PPM	200.00	250.00	N/E	Y	200.00
METHYL ISOBUTYL KETONE	ACGIH	PPM	50.00	75.00	N/E	N	N/E
	OSHA	PPM	N/E	75.00	N/E	N	100.00

ADDITIONAL REGULATORY INFO
The time weighted average (TWA) value described herein is a threshold limit value (TLV) as established by ACGIH. The permissible exposure limit (PEL) is a value established by OSHA.

CALIFORNIA (PROPOSITION #65)
Ingredients in this product are not listed on California's Prop 65 list: "Chemicals Known to the State to Cause Cancer or Reproductive Toxicity."

SECTION 3. REGULATORY INFORMATION (CONTINUED)

SEC. 313 SUPPLIER NOTIFICATION
The following information must be included in all MSDS that are copied and distributed for this material.

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR 372):

SUBSTANCE DESCRIPTION	PERCENT BY WEIGHT (UPPER LIMIT)	CAS#
METHANOL	52	67-56-1
METHYL ISOBUTYL KETONE	3	108-10-1

CLEAN AIR ACT
This formula contains no known ozone depleting chemicals.

HAZARD COMMUNICATION STANDARD
This document is prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200). This MSDS contains thirteen (13) sections.

****

The following effects and/or symptoms are not expected to be experienced by persons who use this product properly and according to ALL instructions, precautions, and warnings; however, should the product user experience ANY questionable effects or symptoms, the product user should immediately seek medical attention.

SECTION 4. HAZARDS IDENTIFICATION

INHALATION ACUTE EXPOSURE EFFECTS
Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted vision, dilation of pupils, and convulsions.

SKIN CONTACT ACUTE EXPOSURE EFFECTS
May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

EYE CONTACT ACUTE EXPOSURE EFFECTS
May cause irritation.

INGESTION ACUTE EXPOSURE EFFECTS
POISON. CANNOT BE MADE NON-POISONOUS. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and/or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation.

CHRONIC EXPOSURE EFFECTS
May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, panoramic damage, and death.

MEDICAL CONDITIONS AGGRAVATED
Diseases of the liver.

PRIMARY ROUTE OF EXPOSURE
Inhalation, ingestion, and dermal.

SECTION 5. FIRST AID MEASURES

INHALATION
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

SKIN CONTACT
Wash with soap and water.

EYE CONTACT
Flush with large quantities of water for at least 15 minutes. If irritation from contact persists, get medical attention.

INGESTION
Call your poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

NOTE TO PHYSICIAN
POISON. THIS PRODUCT CONTAINS METHANOL.
Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. This formula is registered with POISINDEX.
Call your local poison control center for further information.

SECTION 6. FIRE FIGHTING MEASURES

HAZARD RATING SOURCE	HMIS	NFPA
HEALTH	2	1
FLAMMABILITY	3	3
REACTIVITY	0	0
OTHER	B	NA

FLASH METHOD
SETA

FLASH POINT
45.00 F 7.22 C

LOWER EXPLOSION LIMIT
1

GENERAL COMMENTS
OSHA FLAMMABILITY: Class IB

EXTINGUISHING METHOD
Use carbon dioxide, dry powder, or foam.

FIRE FIGHTING PROCEDURES
Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

FIRE AND EXPLOSION HAZARDS
DANGER! FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS, FLAME, AND ALL OTHER SOURCES OF IGNITION. Do not smoke.
Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that

SECTION 6. FIRE FIGHTING MEASURES (CONTINUED)

may be generated by synthetic clothing and other sources.

SECTION 7. ACCIDENTAL RELEASE MEASURES

CLEAN-UP
Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. SMALL SPILLS: take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable. LARGE SPILLS: dike far ahead of spill for later disposal.

For transportation related spills contact Chemtrec at 1-800-424-9300 for emergency assistance.

WASTE DISPOSAL
Dispose in accordance with applicable local, state and federal regulations.

SECTION 8. HANDLING AND STORAGE

STORAGE
Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

HANDLING
Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

SECTION 9. TRANSPORT INFORMATION

TRANSPORTATION
DOMESTIC: ALCOHOLS, N.O.S., 3, UN1987, PGII, (Contains Ethyl Alcohol, Methanol)

IMDG: ALCOHOLS, N.O.S.,3, UN1987, PGII, (Contains Ethyl Alcohol, Methanol) FLASHPOINT 45F (7.22C), EMS 3-06

IATA Alcohols, N.O.S., UN1987, PGII, (Contains Ethyl Alcohol, Methanol) Flashpoint 45F (7.22C), ERG Code 3L

SECTION 10. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION PROTECTION
Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

RESPIRATORY PROTECTION
For OSHA controlled work place and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

SECTION 10. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

SKIN PROTECTION
Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

EYE PROTECTION
Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

OTHER PROTECTION
Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

SECTION 11. PHYSICAL AND CHEMICAL PROPERTIES

VOLATILE %
100.000
by weight

BOILING POINT
GT 147.00 F 63.88 C BOILING RANGE: 147 F - 241 F

VAPOR DENSITY (Air = 1.0)
Heavier than air

EVAPORATION RATE
Slower than ether

BULK DENSITY
6.61
lbs/gal at 75 F

pH FACTOR
N/E

PHOTOCHEMICALLY REACTIVE
NO

MAX V.O.C.
792 grams per liter(exoluding exempt solvents and water)

MAX VAPOR PRESSURE
(of the V.O.C.)76mm Hg at 20 degrees C

SECTION 12. STABILITY AND REACTIVITY

INCOMPATIBILITIES
Incompatible with strong oxidizing agents.

DECOMPOSITION
Decomposition may produce carbon monoxide and carbon dioxide.

POLYMERIZATION
Will not occur.

SECTION 12. STABILITY AND REACTIVITY (CONTINUED)

STABILITY
Stable.

SECTION 13. ADDITIONAL INFORMATION

IMPORTANT NOTE
The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

LEGEND:
PPM = parts per million
MG/M3 = milligrams per cubic meter
N/E or NE = none established
GT = greater than
N/A or NA = not applicable
TCC = tag closed cup
TOC = tag open cup
PMCC = Pensky-Martens closed cup
IDLH = Immediately Dangerous to Life and Health

END OF MSDS

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

Form No. OS
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U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
MATERIAL SAFETY DATA SHEET D-7

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Exxon Company, U.S.A.	(713) 656-3424

ADDRESS (Number, Street, City, State and ZIP Code)
P. O. Box 2180 Houston, Texas 77001

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Diesel Engine Fuel o/	EXXON DIESEL FUEL 2
CHEMICAL FAMILY	FORMULA
Petroleum Hydrocarbon	Complex mixture of petroleum hydrocarbons

SECTION II HAZARDOUS INGREDIENTS

	%	TLV (UNITS
Petroleum Distillate (Diesel Fuel)	100	200 ppm

SECTION III PHYSICAL DATA

BOILING RANGE IBP-FBP	360-650°F	SPECIFIC GRAVITY (H_2O=1)	0.84
VAPOR PRESSURE (mm Hg.) @ 20°C	< 1	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	> 6	EVAPORATION RATE (n-BUTYL ACETATE=1)	0.02
SOLUBILITY IN WATER	Negligible		

APPEARANCE AND ODOR
Water-white to light straw color. Faint hydrocarbon odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	FLAMMABLE OR EXPLOSIVE LIMITS (PERCENT BY VOLUME IN AIR)	LOWER LIMIT	UPPER LIM
Pensky Martens Closed Cup 150°F		0.9%	6.0%

EXTINGUISHING MEDIA
Foam, dry chemical, CO_2, water spray, or fog.

SPECIAL FIRE FIGHTING PROCEDURES
Use air-supplied rescue equipment for enclosed areas.
Cool exposed containers with water. Avoid breathing vapor or fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Do not store or mix with strong oxidants like liquid chlorine or concentrated oxygen.

COMBUSTIBLE LIQUID

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
200 ppm for 8-hour workday.

EFFECTS OF OVEREXPOSURE
Inhalation of high vapor concentrations (attainable at elevated temperature) may have results ranging from mild depression to respiratory irritation. Prolonged or repeated liqu contact with the skin will dry and defat the skin leading to irritation and dermatitis.

EMERGENCY AND FIRST AID PROCEDURES
If overcome by vapor, remove from exposure immediately; call a Physician. If breathing i irregular or stopped, start resuscitation, administer oxygen. If ingested, DO NOT induce vomiting; call a Physician. In case of skin contact, remove any contaminated clothing, and wash skin with soap and warm water. If splashed into the eyes, flush eyes with clear water for 15 minutes or until irritation subsides.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Strong oxidants like: liquid chlorine, concentrated oxygen, sodium- or clacium hypochlorit

HAZARDOUS DECOMPOSITION PRODUCTS
Fumes, smoke and carbon monoxide, in the case of incomplete combustion.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all ignition sources. Keep people awa Recover free liquid. Add absorbent (sand, earth, sawdust, etc.) to spill area. Avoid breathing vapors. Ventilate confined spaces. Open all windows and doors. Keep petroleum products out of sewers and watercourses by diking or impounding. Advise authorities if pr duct has entered or may enter sewers, watercourses, or extensive land areas.

WASTE DISPOSAL METHOD
Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved disposal site or facility.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Normally not needed. Use hydrocarbon vapor canister or supplied-air respiratory protection in confined or enclosed spaces if necessary.

VENTILATION	LOCAL EXHAUST: Face velocity >60 fpm.	SPECIAL: Use only with adequate* ventilation.
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Use chemical-resistant gloves, if needed to avoid repeated or prolonged skin contact.

EYE PROTECTION Use splash goggles or face shield when eye contact may occur

OTHER PROTECTIVE EQUIPMENT Use chemical-resistant apron or other clothing if needed to avoid repeated or prolonged skin contact.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants. Adequate* ventilation required.

* Adequate means equivalent to outdoors.

OTHER PRECAUTIONS Avoid breathing vapors. Avoid prolonged or repeated contact with skin. Remove contaminated clothing, launder before reuse. Remove contaminated shoes and thoroughly dry before reuse. Wash skin thoroughly with soap and water after contact.

FOR ADDITIONAL INFORMATION ON HEALTH EFFECTS CONTACT:
Director of Industrial Hygiene
(713) 656-2443

FOR OTHER PRODUCT INFORMATION CONTACT:
Manager, Marketing Technical Services
(713) 656-4929

M E M O R A N D U M

TO: MSDS Requester

FROM: Holly Miller - 3E Company Data Management

RE: The MSDS you have requested

Manufacturer: Southern Counties Oil

Product: Diesel Fuel

Per the Manufacturer the MSDS(s) listed below cover the above product.

Diesel Fuel #2

Ultramar Inc.

MATERIAL SAFETY DATA SHEET

ULTRAMAR INC.
SAFETY AND LOSS CONTROL DEPARTMENT
24-HOUR EMERGENCY TELEPHONE NUMBER

P. O. BOX 93102
LONG BEACH, CALIFORNIA 90809-3102
(213) 491-8785 OR (213) 435-5832

SUBSTANCE IDENTIFICATION

SUBSTANCE: DIESEL FUEL NO. 2

CAS-NUMBER 68476-34-6

TRADE NAMES/SYNONYMS:
DIESEL OIL; DIESEL FUEL; DIESEL OIL, MEDIUM; FUELS, DIESEL, NO. 2; DIESEL OIL NO. 2-D; DIESEL FUEL OIL NO. 2-D; DIESEL FUEL NO. 2-D; NO. 2 DIESEL FUEL; WINTER DIESEL; OHS07100

CERCLA RATINGS (SCALE 0-3): HEALTH=3 FIRE=2 REACTIVITY=0 PERSISTENCE=1
NFPA RATINGS (SCALE 0-4): HEALTH=0 FIRE=2 REACTIVITY=0

COMPONENTS AND CONTAMINANTS

COMPONENT: DIESEL FUEL OIL NO. 2-D PERCENT: >99

OTHER CONTAMINANTS: MAY CONTAIN TRACES OF SULFUR

EXPOSURE LIMIT:
MINERAL OIL MIST:
5 MG(MINERAL OIL MIST)/M3 OSHA TWA
5 MG(MINERAL OIL MIST)/M3 ACGIH TWA; 10 MG(MINERAL OIL MIST)/M3 ACGIH STEL

HYDROGEN SULFIDE:
10 PPM (14 MG/M3) OSHA TWA; 15 PPM (21 MG/M3) OSHA STEL
10 PPM (14 MG/M3) ACGIH TWA; 15 PPM (21 MG/M3) ACGIH STEL
10 PPM NIOSH RECOMMENDED 10 MINUTE CEILING

500 POUNDS SARA SECTION 302 THRESHOLD PLANNING QUANTITY
100 POUNDS SARA SECTION 304 REPORTABLE QUANTITY

PHYSICAL DATA

DESCRIPTION: COLORLESS TO YELLOW-BROWN LIQUID WITH A MILD PETROLEUM ODOR.

BOILING POINT: 350-680 F (177-360 C) MELTING POINT: 0 F (-18 C)

SPECIFIC GRAVITY: 0.87-0.90 SOLUBILITY IN WATER: INSOLUBLE

VAPOR DENSITY: >1 VAPOR PRESSURE: 1 MMHG @ 20 C

OTHER PHYSICAL DATA
VISCOSITY: 32.6-40.1 SSU @ 100 F

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD
MODERATE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.

VAPOR-AIR MIXTURES ARE EXPLOSIVE ABOVE FLASH POINT.

FLASH POINT: >125 F (>52 C) UPPER EXPLOSION LIMIT: 7.5%

LOWER EXPLOSION LIMIT: 0.6% AUTOIGNITION TEMP.: >475 F (>246 C)

FLAMMABILITY CLASS (OSHA): II

FIREFIGHTING MEDIA:
DRY CHEMICAL, CARBON DIOXIDE, HALON, WATER SPRAY OR STANDARD FOAM

(1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR STANDARD FOAM (1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4).

FIREFIGHTING:
MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. COOL FIRE-EXPOSED CONTAINERS WITH WATER FROM SIDE UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM STORAGE TANK ENDS. FOR MASSIVE FIRE IN STORAGE AREA, USE UNMANNED HOSE HOLDER OR MONITOR NOZZLES, ELSE WITHDRAW FROM AREA AND LET FIRE BURN. WITHDRAW IMMEDIATELY IN CASE OF RISING SOUND FROM VENTING SAFETY DEVICE OR ANY DISCOLORATION OF STORAGE TANK DUE TO FIRE (1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4, GUIDE PAGE 27).

EXTINGUISH ONLY IF FLOW CAN BE STOPPED; USE FLOODING AMOUNTS OF WATER AS A FOG, SOLID STREAMS MAY BE INEFFECTIVE. COOL CONTAINERS WITH FLOODING AMOUNTS OF WATER, APPLY FROM AS FAR A DISTANCE AS POSSIBLE. AVOID BREATHING VAPORS, KEEP UPWIND.

TRANSPORTATION

DEPARTMENT OF TRANSPORTATION HAZARD CLASSIFICATION 49CFR172.101:
COMBUSTIBLE LIQUID

DEPARTMENT OF TRANSPORTATION LABELING REQUIREMENTS 49CFR172.101 AND SUBPART E:
NONE

DEPARTMENT OF TRANSPORTATION PACKAGING REQUIREMENTS: NONE
EXCEPTIONS: 49CFR173.118A

TOXICITY

DIESEL FUEL:
TOXICITY DATA: 7.5 GM/KG (MARKETPLACE SAMPLE) ORAL-RAT LD50 (AETODY); >5 ML/KG (MARKETPLACE SAMPLE) SKIN-RABBIT LD50 (AETODY).
CARCINOGEN STATUS: HUMAN INADEQUATE EVIDENCE (IARC); ANIMAL LIMITED EVIDENCE (IARC).
LOCAL EFFECTS: IRRITANT- MUCOUS MEMBRANE, SKIN.
ACUTE TOXICITY LEVEL: SLIGHTLY TOXIC BY DERMAL ABSORPTION; RELATIVELY NON-TOXIC BY INGESTION.
TARGET EFFECTS: CENTRAL NERVOUS SYSTEM DEPRESSANT. POISONING MAY ALSO AFFECT THE LIVER AND KIDNEYS.

HEALTH EFFECTS AND FIRST AID

INHALATION:
DIESEL FUEL:
IRRITANT/NARCOTIC.
- ACUTE EXPOSURE- VAPORS OR MIST MAY CAUSE MUCOUS MEMBRANE IRRITATION. HIGH LEVELS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS OF HEADACHE, DIZZINESS, GIDDINESS, ANOREXIA, NAUSEA, VOMITING, WEAKNESS, LOSS LOSS OF COORDINATION AND STUPOR.
- CHRONIC EXPOSURE- PROLONGED OR REPEATED EXPOSURE MAY CAUSE IRRITATION. ONE INDIVIDUAL EXPOSED TO DIESEL VAPORS IN A TRUCK CAB DEVELOPED NEPHROTOXIC EFFECTS.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. KEEP PERSON WARM AND AT REST. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:
DIESEL FUEL:
IRRITANT.
- ACUTE EXPOSURE- MAY CAUSE SMARTING, REDNESS AND IRRITATION. A SAMPLE OF DIESEL FUEL APPLIED TO RABBITS UNDER A PATCH FOR 24 HOURS CAUSED EXTREME IRRITATION WITH SEVERE ERYTHEMA AND EDEMA WITH BLISTERING AND OPEN SORES.
- CHRONIC EXPOSURE- REPEATED OR PROLONGED CONTACT MAY CAUSE DEFATTING AND DRYING OF THE SKIN RESULTING IN IRRITATION AND DERMATITIS. TWO INDIVIDUALS

WITH TOPICAL EXPOSURE FROM WASHING HAIR OR HANDS WITH DIESEL OIL DEVELOPED ACUTE OLIGURIC RENAL FAILURE. REPEATED APPLICATIONS TO RABBIT SKIN PRODUCED 67% MORTALITY AT 8 ML/KG. THE PRIMARY CAUSES OF DEATH WERE DEPRESSION AND ANOREXIA INDUCED BY DERMAL IRRITATION WITH INFECTION RATHER THAN SYSTEMIC INTOXICATION. NECROSPY REVEALED CONGESTED LIVERS AND KIDNEYS. HISTOPATHOLOGY REVEALED MULTIFOCAL NECROSIS AND CENTROLOBULAR VACUOLAR DEGENERATION OF THE LIVER.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:
DIESEL FUEL:
ACUTE EXPOSURE- LIQUID OR VAPOR MAY CAUSE SLIGHT IRRITATION.
CHRONIC EXPOSURE- REPEATED OR PROLONGED EXPOSURE MAY CAUSE IRRITATION.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:
DIESEL FUEL:
IRRITANT/NARCOTIC.
ACUTE EXPOSURE- MAY CAUSE NAUSEA, VOMITING, CRAMPING, DIARRHEA, AND POSSIBLY SYMPTOMS OF CENTRAL NERVOUS SYSTEM DEPRESSION. ASPIRATION OF EVEN SMALL AMOUNTS DURING INGESTION OR VOMITING MAY RESULT IN SEVERE PULMONARY IRRITATION, COUGHING, GAGGING, DYSPNEA, SUBSTERNAL DISTRESS AND ULTIMATELY EDEMA AND HEMORRHAGE.
CHRONIC EXPOSURE- NO DATA AVAILABLE.

FIRST AID- DO NOT INDUCE VOMITING. IF MORE THAN 1 ML/KG OF PETROLEUM DISTILLATES IS INGESTED, IT SHOULD BE REMOVED BY GASTRIC LAVAGE WITH ACTIVATED CHARCOAL AND A CUFFED ENDOTRACHEAL TUBE TO PREVENT ASPIRATION. GASTRIC LAVAGE AND INSERTION OF CUFFED ENDOTRACHEAL TUBE SHOULD BE PERFORMED BY QUALIFIED MEDICAL PERSONNEL. IN THE ABSENCE OF DEPRESSION OR CONVULSIONS OR IMPAIRED GAG REFLEX, IPECAC EMESIS CAN ALSO BE DONE WITHOUT INCREASING THE HAZARD OF ASPIRATION. WHEN VOMITING OCCURS, KEEP PERSONS HEAD LOWER THAN HIPS TO HELP PREVENT PULMONARY ASPIRATION. AFTER VOMITING STOPS, GIVE 30-60 ML OF FLEET'S PHOSPHO-SODA DILUTED 1:4 IN WATER. GET MEDICAL ATTENTION IMMEDIATELY. TREATMENT SHOULD BE PERFORMED BY QUALIFIED MEDICAL PERSONNEL (DREISBACH, HANDBOOK OF POISONING, 11TH EDITION).

ANTIDOTE:
NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY SECTION

REACTIVITY:
STABLE UNDER NORMAL TEMPERATURES AND PRESSURES IN A CLOSED CONTAINER.

INCOMPATIBILITIES:
DIESEL FUEL:
OXIDIZERS (STRONG): FIRE AND EXPOSION HAZARD.

DECOMPOSITION:
THERMAL DECONPOSITION MAY RELEASE VARIOUS HYDROCARBONS AND HYDROCARBON DERIVATIVES AND TOXIC OXIDES OF CARBON AND SULFUR.

DIESEL EXHAUST PARTICULATES, AND TO A LIMITED EXTENT THE GASEOUS FRACTION, HAVE BEEN ASSOCIATED WITH LUNG CANCER INDUCTION IN ANIMALS. LIMITED EPIDEMIOLOGICAL EVIDENCE ALSO SUGGESTS AN ASSOCIATION BETWEEN OCCUPATIONAL EXPOSURE TO DIESEL ENGINE EMISSIONS AND LUNG CANCER.

POLYMERIZATION:
HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

STORAGE-DISPOSAL

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING

OF THIS SUBSTANCE. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE ENVIRONMENTAL PROTECTION AGENCY.

STORAGE

STORE IN ACCORDANCE WITH 29 CFR 1910.106.

BONDING AND GROUNDING: SUBSTANCES WITH LOW ELECTROCONDUCTIVITY, WHICH MAY BE IGNITED BY ELECTROSTATIC SPARKS, SHOULD BE STORED IN CONTAINERS WHICH MEET THE BONDING AND GROUNDING GUIDELINES SPECIFIED IN NFPA 77-1983, RECOMMENDED PRACTICE ON STATIC ELECTRICITY.

STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

DISPOSAL

DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 40 CFR 262. EPA HAZARDOUS WASTE NUMBER D001.

CONDITIONS TO AVOID

AVOID CONTACT WITH HEAT, SPARKS, FLAMES, OR OTHER SOURCES OF IGNITION. VAPORS MAY BE EXPLOSIVE. AVOID OVERHEATING OF CONTAINERS; CONTAINERS MAY VIOLENTLY RUPTURE IN HEAT OF FIRE. AVOID CONTAMINATION OF WATER SOURCES.

TRACE AMOUNTS OF HYDROGEN SULFIDE MAY BE PRESENT IN THIS PRODUCT. THERE IS A POTENTIAL FOR ACCUMULATION OF HYDROGEN SULFIDE IN THE HEAD SPACE OF CONTAINERS OR IN ENCLOSED AREAS WHERE THE PRODUCT IS STORED, HANDLED OR USED.

SPILLS AND LEAKS

OCCUPATIONAL-SPILL:
SHUT OFF IGNITION SOURCES. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. USE WATER SPRAY TO REDUCE VAPORS. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. NO SMOKING, FLAMES OR FLARES IN HAZARD AREA. KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZARD AREA AND RESTRICT ENTRY.

PROTECTIVE EQUIPMENT SECTION

VENTILATION:
PROVIDE LOCAL EXHAUST VENTILATION AND/OR GENERAL DILUTION VENTILATION TO MEET PUBLISHED EXPOSURE LIMITS.

RESPIRATOR:
THE FOLLOWING RESPIRATORS ARE RECOMMENDED BASED ON INFORMATION FOUND IN THE PHYSICAL DATA, TOXICITY AND HEALTH EFFECTS SECTIONS. THEY ARE RANKED IN ORDER FROM MINIMUM TO MAXIMUM RESPIRATORY PROTECTION.
THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED ON CONTAMINATION LEVELS FOUND IN THE WORK PLACE, MUST NOT EXCEED THE WORKING LIMITS OF THE RESPIRATOR AND BE JOINTLY APPROVED BY THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINE SAFETY AND HEALTH ADMINISTRATION (NIOSH-MSHA).

TYPE 'C' SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE OR WITH A FULL FACEPIECE, HELMET OR HOOD OPERATED IN CONTINOUS-FLOW MODE.

SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

SUPPLIED-AIR RESPIRATOR WITH FULL FACEPIECE AND OPERATED IN PRESSURE-DEMAND

OR OTHER POSITIVE PRESSURE MODE IN COMBINATION WITH AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

CLOTHING:
WEAR OIL IMPERVIOUS CLOTHING. AVOID PROLONGED OR REPEATED CONTACT WITH SUBSTANCE. AVOID WEARING OIL SOAKED CLOTHING.

GLOVES:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT WITH THIS SUBSTANCE.

EYE PROTECTION:
EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES TO PREVENT EYE CONTACT WITH THIS SUBSTANCE. CONTACT LENSES SHOULD NOT BE WORN.

CREATION DATE: 03/14/85 REVISION DATE: 06/27/88

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Retrieving MSDS Sheet for DS-67 PLUS AEROSOL

One Moment Please...

MATERIAL SAFETY DATA SHEET:DS-67 PLUS AEROSOL

DATE OF ISSUE: 06/15/2006 **SUPERCEDES:** 04/24/2000

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
DS-67 PLUS AEROSOL

Chemical Family:
SOLVENT BLEND

Formula Mixture: X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
D Hollas/Chemist	5635	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
METHYLENE CHLORIDE	IRR/CARC	50 PPM 1	25 PPM 2	N/E	75-09-2
LIGHT ALIPHATIC SOLVENT NAPHTHA	IRRITANT	100 PPM $1	500 PPM $2	N/E	64741-66-8
1-METHOXY-2-PROPANOL	IRRITANT	100 PPM 1	N/E 2	150 PPM 1	107-98-2
TOLUENE	IRRITANT	50 PPM 1	100 PPM 2	N/E	108-88-3
MEDIUM ALIPHATIC SOLVENT NAPHTHA	IRRITANT	100 PPM $1	500 PPM $2	N/E	64742-88-7
PROPANE	FLAM/ASPHY	1000 PPM#1	1000 PPM 2	N/E	74-98-6
N-BUTANE	FLAM/ASPHY	1000 PPM#1	N/E 2	N/E	106-97-8

$ STODDARD SOLVENT VALUES

ALIPHATIC HYDROCARBON GASES

SECTION III - PHYSICAL DATA

Boiling Point (f):	103°	**Specific Gravity (H20=1):**	0.69
Vapor Pressure (MM HG):	2295.08	**Color:**	COLORLESS
Vapor Density (Air=1):	2.0	**Odor:**	SWEET

PH @ 100% :	N/A	**Clarity**	TRANSPARENT
% Volatile by Volume:	100	**Evaporation Rate (BU A/C=1):**	76.32
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	**Flammable Limits:**	**LEL:**	**UEL:**
41°F / SETA FLASH	PRODUCT MIXTURE	0.9%	23%

Extinguishing Media:

Foam:X Alcohol Foam: CO2:X Dry Chemical:X Water Spray: Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT AND/OR LOW-LYING SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. FLAME EXTENSION: > 36 INCHES, BURNBACK: 6 INCHES. THE USE OF WATER SPRAY (F0G) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE.

Health:3 Flammability:3 Instability:0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute(Short Term Exposure)

EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS TEARING, REDNESS, BLURRED VISION, AND A BURNING SENSATION. PROLONGED CONTACT MAY CAUSE SEVERE IRRITATION AND TRANSIENT CORNEAL INJURY. SKIN CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. PROLONGED CONTACT CAN CAUSE SEVERE IRRITATION AND A BURNING SENSATION AND MAY CAUSE DRYING, DEFATTING, AND CRACKING OF THE SKIN RESULTING IN DERMATITIS. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS. INHALATION: CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. AT LOW VAPOR CONCENTRATIONS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, DROWSINESS, WEAKNESS, UNCONCIOUSNESS, POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION, AND MAY BE FATAL. EXCESSIVE EXPOSURE MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. THIS CAN BE ADDITIVE TO THE INCREASE CAUSED BY SMOKING AND OTHER CARBON MONOXIDE SOURCES. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND DIARRHEA. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. AVOID ALCOHOL CONSUMPTION. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

-Chronic (Long Term Exposure)

ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO HYDROCARBON MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSTIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. EXCESSIVE EXPOSURE TO PRODUCT MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. EFFECTS MAY BE INCREASED BY SMOKING OR OTHER SOURCE OF CARBON MONOXIDE. CHRONIC INHALATION OF SOLVENTS LIKE TOLUENE HAVE CAUSED HEARTBEAT IRREGULARITY, HEARTBEAT INCREASE, AND PERMANENT CENTRAL AND PERIPHERAL NERVOUS SYSTEM DAMAGE, RESULTING IN DECREASED LEARNING ABILITY, LOSS OF MEMORY, PERSONALITY CHANGES, AND DISTURBANCES IN GAIT. A CONDITION KNOWN AS "PAINTER'S SYNDROME" CAN OCCUR CAUSING A LOSS OF SENSATION IN THE ARMS AND HANDS (PERIPHERAL NEUROPATHY). PROLONGED OR REPEATED EXPOSURE MAY CAUSE CARDIAC SENSITIZATION. MAY CAUSE LIVER AND KIDNEY EFFECTS. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS; PRE-EXISTING LIVER AND KIDNEY DISEASES; PRE-EXISTING HEART DISORDERS. TARGET ORGANS: CENTRAL AND PERIPHERAL NERVOUS SYSTEM, LIVER, KIDNEY, AUDITORY SYSTEM, BLOOD-FORMING ORGANS, AND HEART. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: Inhalation:X Ingestion: Absorption:X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

CHLORINATED HYDROCARBONS MAY SENSITIZE THE HEART TO EPINEPHRINE AND OTHER CIRCULATING CATECHOLAMINES SO THAT ARRHYTHMIAS MAY OCCUR. CAREFUL CONSIDERATION OF THIS POTENTIAL ADVERSE EFFECT SHOULD PRECEDE ADMINISTRATION OF EPINEPHRINE OR OTHER CARDIAC STIMULANTS AND THE SELECTION OF BRONCHODILATORS. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes **NTP:** Yes **OSHA:** No **ACGIH:** Yes **OTHER:** No

VOC CONTENT: 84.9% BY WEIGHT; 92.4% BY VOLUME; 585 G/L

METHYLENE CHLORIDE
ORL-HMN LDLo: 357 MG/KG 4.
ORL-RAT LD50: 1600 MG/KG 4.
SKN-RBT SDT: 100 MG/24H MODERATE 4.
EYE-RBT SDT: 162 MG MODERATE 4.
IHL-RAT LC50: 52 G/M3 4.
IHL-HMN TCLo: 500 PPM/8H 4.

TUMORIGENIC DATA
IHL-RAT TCLo: 3500 PPM/6H/2Y-I 4.

REPRODUCTIVE DATA
IHL-RAT TCLo: 4500 PPM/24H/FEMALE 1-17 DAYS AFTER CONCEPTION 4.

CARCINOGENICITY
ACGIH GROUP A3: CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS
IARC GROUP 2B: ANIMAL SUFFICIENT EVIDENCE; HUMAN INADEQUATE EVIDENCE
NTP: REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN

METHYLENE CHLORIDE HAS BEEN EVALUATED FOR POSSIBLE CANCER CAUSING EFFECTS IN LABORATORY ANIMALS. INHALATION STUDIES AT CONCENTRATIONS OF 2000 AND 4000 PPM INCREASED THE INCIDENCE OF MALIGNANT LIVER AND LUNG TUMORS IN MICE. THREE INHALATION STUDIES OF RATS HAVE SHOWN INCREASED INCIDENCE OF BENIGN MAMMARY GLAND TUMORS IN FEMALE RATS AT CONCENTRATIONS OF 500 PPM AND ABOVE AND INCREASES IN BENIGN MAMMARY GLAND TUMORS IN MALES AT CONCENTRATIONS OF 1500 PPM AND ABOVE. RATS EXPOSED TO 50 AND 200 PPM VIA INHALATION SHOWED NO INCREASED INCIDENCE OF TUMORS. MICE AND RATS EXPOSED BY INGESTION AT LEVELS UP TO 250 MG/KG/DAY LIFETIME AND HAMSTERS EXPOSED VIA INHALATION TO CONCENTRATIONS UP TO 35OO PPM LIFETIME DID NOT SHOW AN INCREASED INCIDENCE OF TUMORS. 5.

EPIDEMIOLOGY STUDIES OF 751 HUMANS CHRONICALLY EXPOSED TO METHYLENE CHLORIDE IN THE WORKPLACE OF WHICH 252 WERE EXPOSED FOR A MINIMUM OF 20 YEARS DID NOT DEMONSTRATE ANY INCREASE IN DEATHS CAUSED BY CANCER OR CARDIAC PROBLEMS. A SECOND STUDY OF 2227 WORKERS CONFIRMED THESE
RESULTS. 5.

LABORATORY ANIMAL STUDIES ON MICE, RATS, AND RABBITS HAVE BEEN CONDUCTED TO EVALUATE THE POTENTIAL REPRODUCTIVE AND DEVELOPMENTAL EFFECTS OF METHYLENE CHLORIDE EXPOSURES. METHLYENE CHLORIDE EXPOSURE HAS NOT BEEN SHOWN TO CAUSE TERATOGENIC EFFECTS (BIRTH DEFECTS) IN EXPERIMENTAL ANIMALS. 5.

LIGHT ALIPHATIC SOLVENT NAPHTHA
ORL-RAT TDLo: 10 GM/KG/4W-I 4.
IHL-RAT TCLo: 7500 PPM/13W-I 4.

1-METHOXY-2-PROPANOL
IHL-RAT LC50: 10,000 PPM/5H 5.
ORL-RAT LD50: 7200 MG/KG 4.
SKN-RBT LD50: 13 G/KG 5.

SKN-RBT OPEN IRRITATION TEST: 500 MG MILD 5.
EYE-RBT SDT: 500 MG/24H MILD 5.

TOLUENE
EYE-RBT SDT: 870 UG MILD 4.
SKN-RBT SDT: 20 MG/24H MODERATE 4.
SKN-RBT LD50: 12.2 G/KG 4.
ORL-HMN LDLo: 50 MG/KG 4.
ORL-RAT LD50: 636 MG/KG 4.
IHL-RAT LC50: 49 GM/M3/4H 4.

ANIMAL STUDIES HAVE SHOWN THAT REPEATED INHALATION OF HIGH LEVELS PRODUCED HISTOLOGICAL CHANGES IN THE BRAIN, DEGENERATION OF THE HEART TISSUE, CARDIAC SENSITIZATION, AND POSSIBLE IMMUNE SYSTEM SUPPRESSION. INTENTIONAL ABUSE OF TOLUENE VAPORS HAS BEEN LINKED TO DAMAGE OF THE BRAIN, KIDNEY, AND LIVER. 5.

MANY CASE STUDIES INVOLVING ABUSE DURING PREGNANCY INDICATE THAT TOLUENE CAN CAUSE BIRTH DEFECTS, GROWTH RETARDATION, AND LEARNING DIFFICULTIES. 5.

MEDIUM ALIPHATIC SOLVENT NAPHTHA
ORL-RAT LD50: >25 ML/KG 5.
IHL-RAT LC50: >710 PPM/4HR 5.
SKN-RBT LD50: 5 ML/KG 5.
SKN-RBT: MODERATE IRRITATION 5.
EYE-RBT: NEGLIGIBLE IRRITATION 5.

AT VERY HIGH ORAL DOSES, THIS PRODUCT CAUSED REVERSIBLE DAMAGE TO THE STOMACH, LIVER, AND KIDNEY OF MALE RATS. 5.

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. IN ONE OF THE STUDIES, A LOW GRADE ANEMIA WAS ALSO OBSERVED. 5.

THIS PRODUCT IS FORMULATED WITH PETROLEUM DISTILLATES WHICH ARE CONSIDERED TO BE SEVERELY REFINED AND NOT CONSIDERED TO BE CARCINOGENIC UNDER IARC. 5.

PROPANE
IHL-LC50 >40% BY VOLUME 5.

N-BUTANE
IHL-RAT LC50: 658 G/M3/4H 4.

HUMAN VOLUNTEERS EXPOSED REPEATEDLY TO GASES OF SIMILAR HYDROCARON MIXTURES RANGING FROM 250 TO 1000 PPM EXHIBITED NO CARDIAC OR PULMONARY FUNCTION ABNORMALITIES. 5.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS, AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH, CONCENTRATED HYDROGEN PEROXIDE, AND NITROGEN PEROXIDE; ALKALIES; AMINES; OXYGEN; WATER; RECTIVE POWDERED METALS SUCH AS ALUMINUM, COPPER, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS.

Hazardous Decomposition Products:

OXIDES OF CARBON; HYDROGEN CHLORIDE GAS, PHOSGENE GAS, CHLORINE GAS, HYDROCHLORIC ACID, ALDEHYDES, KETONES, AND ORGANIC ACIDS.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE CLOTHING, ELIMINATE IGNITION SOURCES OF ELECTRICAL, STATIC, OR FRICTIONAL SPARKS, VENTILATE THE AREA, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CARE AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS OR VAPORS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:

RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:

POLYVINYL ALCOHOL GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:

CHEMICAL GOGGLES SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:35°F. Maximum Temperature:120°F.

Precautions to be taken in Handling and Storing:

USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
METHYLENE CHLORIDE	75-09-2	20
TOLUENE	108-88-3	15

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2006.
2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR.
4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2006.
5. VENDORS MSDS.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC: CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC: INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT: MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, PNOR: PARTICULATES NOT OTHERISE REGULATED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL: INHALATION, HMN:HUMAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

NFPA Hazard Rating: **(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Aerosol Level (NFPA 30B): 3

Supercedes Date 09/16/2008 **Issuing Date** 03/02/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DUO POWER
Product Code 0095
Recommended use Cleaning agent
Chemical nature Mixture

Information on Manufacturer

CHEMSEARCH DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Emergency Telephone Number

CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

WARNING
Severe skin irritation
Severe eye irritation
Irritating to respiratory system
Harmful if swallowed

Color Green **Physical State** Liquid **Odor** None

Potential Health Effects

Principle Route of Exposure Skin contact, Eye contact.
Primary Routes of Entry None known
Acute Effects
Eyes Severe irritation.
Skin Severe irritation.
Inhalation Causes respiratory tract irritation.
Ingestion Irritating to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic Toxicity None known.
Target Organ Effects Skin, Eyes, Respiratory system.
Aggravated Medical Conditions Skin disorders, Respiratory disorders.
Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Sodium dodecylbenzenesulfonate	25155-30-0
Sodium tripolyphosphate	7758-29-4
Sodium xylene sulfonate	1300-72-7
Sodium hydroxide	1310-73-2

4. FIRST AID MEASURES

General Advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately. Wash contaminated clothing before re-use.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Not applicable
Autoignition Temperature No information available.
Flammability Limits in Air % Not applicable. **Upper** No data available **Lower** No data available
Suitable Extinguishing Media
Foam. Carbon dioxide (CO2). Dry chemical. Water spray.
Specific hazards arising from the chemical
Material can create slippery conditions.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 2	**Flammability** 1	**Instability** 0
HMIS	**Health** 2	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Methods for Cleaning Up Pick up and transfer to properly labeled containers.
Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Storage Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** X **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium dodecylbenzenesulfonate	No data available	No data available	No data available
Sodium tripolyphosphate	No data available	No data available	No data available
Sodium xylene sulfonate	No data available	No data available	No data available
Sodium hydroxide	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Semi-viscous
Color	Green	**Odor**	None
Appearance	Transparent	**pH**	12.4
Specific Gravity	1.1	**Evaporation Rate**	0.45 (Butyl acetate=1)
Percent Volatile (Volume)	76.5	**VOC Content (%)**	0
VOC Content (g/L)	0	**Vapor Pressure**	15.5 mmHg @ 70°F
Vapor Density	0.6	**Solubility**	Soluble
Boiling Point/Range	210 °F / 99 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid None known

Incompatible Products Strong oxidizing agents, Acids.

Hazardous Decomposition Products Carbon oxides, Sulfur oxides, Oxides of phosphorus, Phosphorus compounds, Hydrogen sulfide and smoke, Sodium oxides.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium dodecylbenzenesulfonate	438 mg/kg (Rat)	no data available	no data available	no data available	no data available
Sodium tripolyphosphate	3100 mg/kg (Rat)	7940 mg/kg (Rabbit)	no data available	no data available	no data available
Sodium xylene sulfonate	7200 mg/kg (Rat)	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	1350 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium dodecylbenzenesulfonate	no data available	no data available	no data available	no data available	no data available
Sodium tripolyphosphate	no data available	no data available	no data available	no data available	Spleen, kidneys
Sodium xylene sulfonate	no data available	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium dodecylbenzenesulfonate	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium tripolyphosphate	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium xylene sulfonate	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium hydroxide	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium dodecylbenzenesulfonate	no data available	LC50 = 10.8 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Sodium tripolyphosphate	no data available	LC50 = 1650 mg/L Leuciscus idus 48 h	no data available	no data available	N/A
Sodium xylene sulfonate	no data available	no data available	no data available	no data available	N/A
Sodium hydroxide	no data available	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium dodecylbenzenesulfonate	Not applicable	Not applicable
Sodium tripolyphosphate	Not applicable	Not applicable
Sodium xylene sulfonate	Not applicable	Not applicable
Sodium hydroxide	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D2B Toxic materials

16. OTHER INFORMATION

Prepared By Dan Hollas
Supercedes Date 09/16/2008
Issuing Date 03/02/2011
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material

designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Aerosol)

MSDS No.: L112

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: P.O. BOX 159, 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Contact: Robert Geer

Information Telephone Number: 704-688-3430

Last Update: 03/20/2003

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture

2	Health
2	Flammability
0	Reactivity
C	Pers. Protection

II. Ingredients:

[ ] **Trade Secret**

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
124389	Carbon dioxide	0-5						N/AV	5000 ppm	
8008206	Kerosene	40-60						N/AV	100 ppm	
64742525	Naphthenic Petroleum Distillate	40-60						5 mg/m3	5 mg/m3	

III. Hazardous Identification:

Hazard Category:

[X] Acute [ ] Chronic [X] Fire [X] Pressure [ ] Reactive

Hazardous Identification Information:

Danger: Flammable. Harmful or fatal if swallowed. Eye and skin irritant. Contents under pressure.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

N/D

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis, dizziness, respiratory or lung irritation.
Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat & stomach.

Medical Conditions Generally Aggravated by Exposure:

N/D

Emergency and First Aid Procedures:

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Aerosol)

MSDS No.: L112

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: 132F **Lower Explosive Limit:** 0.7% **Upper Explosive Limit:** 5%

F.P. Method: TCC

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream as this could cause the fire to spread. Use equipment or shielding to protect personnel against venting, rupturing, or bursting containers.

Unusual Fire and Explosion:

Contents under pressure. At elevated temperatures, container may vent, rupture, or burst violently.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to sunlight and temperatures above 120° may cause container to vent, rupture, or burst.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS! Danger: Flammable.

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Aerosol)

MSDS No.: L112

IX. Physical and Chemical Properties:

Boiling Point: 320 F

Melting Point: N/A

Evaporation Rate (Butyl Acetate = 1): N/A

Vapor Pressure (mm Hg.): N/A

Specific Gravity (H20 = 1): 0.85000

Vapor Density (AIR = 1): N/A

Solubility In Water: Insoluble

Appearance and Odor: Dark Liquid with petroleum odor

Other Information: N/E

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizers

Decomposition/By Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Hazardous Polymerization:

Will not occur

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping purposes.

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

XVI. Other Information:

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH SUPER PENETRANT (Aerosol)

MSDS No.: L112

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered soley for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is repsonsible for full compliance.

Unax® AW (All Grades)

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Unax® AW (All Grades)

MSDS Code: 722330

Synonyms:
76 Unax® AW 22
76 Unax® AW 32
76 Unax® AW 46
76 Unax® AW 68
76 Unax® AW 100
76 Unax® AW 150
76 Unax® AW 220
76 Unax® AW 320

Intended Use: Hydraulic Fluid

Responsible Party:
ConocoPhillips Lubricants
600 N. Dairy Ashford
Houston, Texas 77079-1175

Customer Service: 888-766-7676

Technical Information: 800-255-9556

MSDS Information: Internet: http://w3.conocophillips.com/NetMSDS/

Emergency Telephone Numbers:
Chemtrec: 800-424-9300 (24 Hours)
California Poison Control System: 800-356-3219

2. HAZARDS IDENTIFICATION

Emergency Overview

This material is not considered hazardous according to OSHA criteria.

NFPA

Appearance: Clear and bright
Physical Form: Liquid
Odor: Petroleum

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and a burning sensation. Prolonged or repeated contact can defat the skin, causing drying and cracking of the skin, and possibly dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available on acute toxicity.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea and diarrhea. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

See Section 11 for additional Toxicity Information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS	Concentration (wt %)
Lubricant Base Oil (Petroleum)	VARIOUS	>99
Additives	PROPRIETARY	<1

4. FIRST AID MEASURES

Eye: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

5. FIRE-FIGHTING MEASURES

NFPA 704 Hazard Class

Health: 0 **Flammability:** 1 **Instability:** 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done with minimal risk. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.
Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for Containment and Clean-Up: Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Conditions for safe storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	ACGIH	OSHA	Other:
Lubricant Base Oil (Petroleum)	TWA: 5mg/m^3 STEL: 10 mg/m^3 as Oil Mist, if generated	TWA: 5 mg/m^3 as Oil Mist, if generated	---

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Personal Protective Equipment (PPE):

Eye/Face: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the performance of their products. Suggested protective materials: Nitrile.

Respiratory: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (MUC) as directed by regulation or the manufacturer's instructions, in oxygen deficient (less than 19.5 percent oxygen) situations, or other conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Appearance:	Clear and bright
Physical Form:	Liquid
Odor:	Petroleum
Odor Threshold:	No data
pH:	Not applicable
Vapor Pressure:	<1
Vapor Density (air=1):	>1
Boiling Point/Range:	No data
Melting/Freezing Point:	<5°F / <-15°C
Pour Point:	<5°F / <-15°C
Solubility in Water:	Insoluble
Partition Coefficient (n-octanol/water) (Kow):	No data
Specific Gravity:	0.87 @ 60ºF (15.6ºC)
Bulk Density:	7.3 lbs/gal
Viscosity:	4 - 24 cSt @ 100°C; 22 - 320 cSt @ 40°C
Percent Volatile:	Negligible
Evaporation Rate (nBuAc=1):	<1
Flash Point:	>302°F / >150°C
Test Method:	Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010
LEL (vol % in air):	No data
UEL (vol % in air):	No data
Autoignition Temperature:	No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated conditions of storage and handling.

Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents, strong acids and strong bases.

Hazardous Decomposition Products: Combustion can yield oxides of carbon, nitrogen, sulfur, phosphorus and zinc.

Hazardous Polymerization: Not known to occur..

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

Acute Data:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Lubricant Base Oil (Petroleum)	>5 g/kg	>2 g/kg	No data

12. ECOLOGICAL INFORMATION

Lubricant oil basestocks are complex mixtures of hydrocarbons (primarily branched chain alkanes and cycloalkanes) ranging in carbon number from C15 to C50. The aromatic hydrocarbon content of these mixtures varies with the severity of the refining process. White oils have negligible levels of aromatic hydrocarbons, whereas significant proportions are found in unrefined basestocks. Olefins are found only at very low concentrations. Volatilization is not significant after release of lubricating oil basestocks to the environment due to the very low vapor pressure of the hydrocarbon constituents. In water, lubricating oil basestocks will float and will spread at a rate that is viscosity dependent. Water solubilities are very low and dispersion occurs mainly from water movement with adsorption by sediment being the major fate process. In soil, lubricating oil basestocks show little mobility and adsorption is the predominant physical process.

Both acute and chronic ecotoxicity studies have been conducted on lubricant base oils. Results indicate that the acute aquatic toxicities to fish, Daphnia, Ceriodaphnia and algal species are above 1000 mg/l using either water accommodated fractions or oil in water dispersions. Since lubricant base oils mainly contain hydrocarbons having carbon numbers in the range C15 to C50, it is predicted that acute toxicity would not be observed with these substances due to low water solubility. Results from chronic toxicity tests show that the no observed effect level (NOEL) usually exceeds 1000 mg/l for lubricant base oils with the overall weight of experimental evidence leading to the conclusion that lubricant base oils do not cause chronic toxicity to fish and invertebrates.

Large volumes spills of lubricant base oils into water will produce a layer of undissolved oil on the water surface that will cause direct physical fouling of organisms and may interfere with surface air exchange resulting in lower levels of dissolved oxygen. Petroleum products have also been associated with causing taint in fish even when the latter are caught in lightly contaminated environments. Highly refined base oils sprayed onto the surface of eggs will result in a failure to hatch.

Extensive experience from laboratory and field trials in a wide range of crops has confirmed that little or no damage is produced as a result of either aerosol exposure or direct application of oil emulsion to the leaves of crop plants. Base oils incorporated into soil have resulted in little or no adverse effects on seed germination and plant growth at contamination rates up to 4%.

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle Used Oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Shipping Description: Not regulated
Note: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

14. TRANSPORTATION INFORMATION

International Maritime Dangerous Goods (IMDG)
Shipping Description: Not regulated
Note: Federal compliance requirements may apply. See 49 CFR 171.12.

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)
UN/ID #: Not regulated

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute Health: No
Chronic Health: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

CERCLA/SARA - Section 313 and 40 CFR 372:
This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds):
This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65:
This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

Canadian Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Regulations.

WHMIS Hazard Class
None

National Chemical Inventories:
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.
All components are either on the DSL, or are exempt from DSL listing requirements.

U.S. Export Control Classification Number: EAR99

16. OTHER INFORMATION

Issue Date: 08-Jan-2008
Status: Final
Previous Issue Date: 30-Mar-2005
Revised Sections or Basis for Revision: Composition (Section 3)
NFPA ratings (Section 2)
Regulatory information (Section 15)
MSDS Code: 722330

MSDS Legend:
ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service Registry; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer of Expressed and implied Warranties:
The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

80-473 BATTERY CLEANER WITH ACID DETECTOR

HMIS RATING	
Health	1
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	1
Reactivity	0
NFPA 30B LEVEL	
1	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-473
PRODUCT NAME ..... Battery Cleaner with Acid Detector
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
Propane/Isobutane/N-Butane (68476-86-8)	800ppm	800ppm	-	20.0
Triethanolamine (102-71-6)	-	5mg/m³	-	5.0

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement.

3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -43°F to 376°F
VAPOR PRESSURE PSIG @ 70°F 25-35
VAPOR DENSITY (AIR = 1) ..... >1
SOLUBILITY IN WATER ..... Soluble
SPECIFIC GRAVITY (H2O = 1) 0.9224
MELTING/FREEZING POINT ..... 32°F
EVAPORATION RATE (Butyl Acetate=1) ..... >1
VOC content (by weight) 15.6%
APPEARANCE AND ODOR ..... Reddish liquid / Amine odor

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -156°F
UPPER EXPLOSIVE LIMIT (%) 9.5
LOWER EXPLOSIVE LIMIT (%) 1.8
EXTINGUISHING MEDIA ..... Dry chemical, foam, CO_2, water fog
SPECIAL FIREFIGHTING PROCEDURES ..... Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus.Water fog may be used to cool fire-exposed containers.
FIRE AND EXPLOSION HAZARDS ..... Heated cans may burst.
NFPA FLAMMABILITY HAZARD 0

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin, Ingestion, Eyes, Inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC) ..... Overexposure may cause nervous system damage, lung damage, and kidney damage.
EYE CONTACT ..... Liquid,aerosols, and vapors may cause pain, tearing, reddening, and swelling accompanied by a stinging
INHALATION ..... Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate, cyanosis from over-exposure to vapor, or skin exposure.
INGESTION ..... This material may be harmful or fatal if swallowed. Corrosive and may cause severe and permanent damage to mouth, throat, and stomach.

5. HEALTH EFFECTS DATA (CONT'D)

SKIN CONTACT ..... Prolonged and repeated contact can result in defatting and drying o the skin which may result in skin irritation and dermatitis (rash).
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease; respiratory disorders.

FIRST AID PROCEDURES

EYES ..... Flush with water for at least 15 minutes; flush under eyelids. Obtain medical attention if irritation persists.
SKIN CONTACT ..... Wash with soap, large volumes of water. Obtain medical attention.
INGESTION ..... Do not induce vomiting; give victim a glass of water or milk. Never give anything by mouth to an unconscious person; obtain medical attention.
INHALATION ..... Remove to fresh air; and resuscitate or administer oxygen if needed. Obtain medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) ..... Presently not on any lists.

6. REACTIVITY

STABILITY ..... Stable
INCOMPATIBILITIES ..... Strong acids, alkalis, oxidizers, and amines.
NFPA REACTIVITY HAZARD 0
HAZARDOUS DECOMPOSITION PRODUCTS ..... Oxides of carbon and nitrogen, forms of chloride, chlorine, and phosgene.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS.. ..... None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety glasses with side shields (or goggles) and a face shield; ventilation sufficient to maintain vapor concentrations below TLV. Chemical resistant gloves and protective clothing if heavy contact is likely.
WASH REQUIREMENTS ..... Wash with soap and water
SPILL OR LEAK PROCEDURES ..... Use absorbent sweeping compound to soak up material. Place in a chemical waste container.
WASTE DISPOSAL METHODS ..... Dispose in accordance with all federal, state, and local regulations.
HANDLING & STORAGE ..... Store below 120°F; keep away from heat, sparks, or open flame. Keep from freezing.
OTHER PRECAUTIONS ..... Use NIOSH approved respirator when spraying more than half a can

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

BATTERY TERMINAL PROTECTOR

80-474

HMIS RATING	
Health	1
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	0
NFPA 30B LEVEL	
N/A	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE TELEPHONE: 614-219-6100
EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-474
PRODUCT NAME ..... Battery Terminal Protector
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
N-hexane (110-54-3	50ppm	50ppm		55
Propane/Isobutane/N-butane (68476-86-8)	800ppm	800ppm		25
Metalworking fluid additive (mixture)	100ppm	100ppm		5
Stoddard Solvent (8052-41-3)	100ppm	100ppm		5

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -43-387°F
VAPOR PRESSURE PSIG @ 70°F 80-90
VAPOR DENSITY (AIR = 1) ..... >1
SOLUBILITY IN WATER ..... Negligible
SPECIFIC GRAVITY (H2O = 1) 0.6871
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Ether=1) ..... >1
VOC content (by weight) 4.20lbs/gal
APPEARANCE AND ODOR ..... Red color/ solvent odor

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -156°F
UPPER EXPLOSIVE LIMIT (%) 9.5
LOWER EXPLOSIVE LIMIT (%) 0.7
EXTINGUISHING MEDIA ..... Dry chemical, CO_2, foam, water fog
SPECIAL FIREFIGHTING PROCEDURES ..... Container can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

FIRE AND EXPLOSION HAZARDS ..... Vapors can travel to a source of ignition and flash back. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity or other sources of ignition; they may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Eyes, Skin, Inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC) ..... Vapors irritating to eyes and respiratory tract. Vapors may cause flash fire or explosion. Overexposure may cause nervous system damage, lung damage, kidney damage.

SIGNS & SYMPTOMS OF EXPOSURE

EYE CONTACT ..... Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.
SKIN CONTACT ..... Prolonged or reaped contact can result in defatting and drying of the skin which may result in skin irritation an dermatitis.
INHALATION ..... Headaches, dizziness, nausea, decreased blood pressure, changes in hear rate and cyanosis may result from overexposure to vapor or skin exposure. Prolonged inhalation may be harmful.
INGESTION ..... This material may be harmful or fatal if swallowed. If a corrosive product, may cause severe and permanent damage to the mouth throat and stomach.

5. HEALTH EFFECTS DATA CON'T.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... None known

FIRST AID PROCEDURES

EYES ..... Flush with water for at least 15 minutes, obtain medical attention.
SKIN CONTACT ..... Wash with soap, large volumes of water. Obtain medical attention immediately.
INGESTION ..... Do not induce vomiting, obtain immediate medical attention.
INHALATION ..... Remove to fresh air. Restore breathing and keep calm and warm.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) ..... The chemical contains in this product is known to the state of California to cause cancer, birth defects or other reproductive harm: Toluene

6. REACTIVITY

STABILITY ..... Stable
INCOMPATIBILITIES ..... Strong acids, alkalis, oxidizers and amines.
HAZARDOUS DECOMPOSITION PRODUCTS ..... Oxides of carbon, nitrogen, and may produce forms of chloride, chlorine and phosgene.
HAZARDOUS POLYMERIZATION ..... Will not occur
HAZARDOUS POLYMERIZATION CONDITIONS ..... None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety glasses; protective neoprene gloves; ventilation sufficient to maintain vapor concentrations below TLV; wear NIOSH approved respirator if TLV is exceeded
WASH REQUIREMENTS ..... Wash with soap and water.
SPILL OR LEAK PROCEDURES ..... Remove all sources of ignition; use absorbent sweeping compound to soak up material; wash area to prevent slipping
WASTE DISPOSAL METHODS ..... Dispose of in accordance with local, state, and federal hazardous waste regulations
HANDLING & STORAGE ..... Store below 120°F; keep away from heat, sparks, or open flame; do not incinerate aerosol cans
OTHER PRECAUTIONS ..... Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST

Specializing in Materials Management since 1923

CIRC-KLEEN FREE Electric Contact & Switch Cleaner 80-725

HMIS RATING	
Health	1
Flammability	1
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	0
Reactivity	0
NFPA 30B LEVEL	
1	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-725
PRODUCT NAME ..... CIRC-KLEEN FREE Electric Contact & Switch Cleaner
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
Dichlorofluoroethane (1717-00-6)	500ppm	500ppm	NE	95
Carbon Dioxide (124-38-9)	5000ppm	5000ppm	30000ppm	10

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... 90° to 90°F
VAPOR PRESSURE PSIG @ 70°F 95-105
VAPOR DENSITY (AIR = 1) ..... >1
SOLUBILITY IN WATER ..... Negligible
SPECIFIC GRAVITY (H2O = 1) 1.2481
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Water=1) ..... >1
VOC content (by weight) 0.00
APPEARANCE AND ODOR ..... Clear liquid/solvent odor

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... Non-flammable
UPPER EXPLOSIVE LIMIT (%) 17.7
LOWER EXPLOSIVE LIMIT (%) 7.6
EXTINGUISHING MEDIA ..... Water fog, dry chemical, CO_2
SPECIAL FIREFIGHTING PROCEDURES ..... Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus
FIRE AND EXPLOSION HAZARDS ..... Heated cans may burst.
NFPA REACTIVITY HAZARD 0

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin, Ingestion, Eyes, Inhalation

HEALTH HAZARDS (ACUTE AND CHRONIC) ..... May cause dizziness or narcosis in high vapor concentrations. Will cause defatting of the skin. Effects are reversible. Long term exposure (years) to high concentrations of vapor may cause lung, liver, or kidney damage. Aspiration hazard if swallowed. Eye and skin irritant. May irritate respiratory tract. The solvents listed have been reported to effect the central nervous system: Dichlorofluoroethane.

SIGNS & SYMPTOMS OF EXPOSURE ..... Inhalation: difficulty in breathing; Skin: redness; Ingestion: vomiting; Alcohol consumed before or after exposure may increase adverse effects.

5. HEALTH EFFECTS DATA (CONT'D)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease; respiratory disorders; may cause central nervous system disorders

FIRST AID PROCEDURES

EYES ..... Flush with water for at least 15 minutes
SKIN CONTACT ..... Wash with soap, large volumes of water, obtain medical attention
INGESTION ..... Do not induce vomiting; gastric lavage; keep individual calm; obtain medical attention
INHALATION ..... Remove to fresh air; administer artificial respiration if breathing stops, obtain medical attention

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) ..... Presently not on any list

6. REACTIVITY

STABILITY ..... Stable
INCOMPATIBILITIES ..... Strong Acids, Alkalis, Oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS ..... CO_2, CO, hydrogen fluoride, hydrogen chloride, chlorine
HAZARDOUS POLYMERIZATION ..... Will not occur
HAZARDOUS POLYMERIZATION CONDITIONS.. ..... None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety glasses or goggles; ventilation sufficient to maintain vapor concentrations below TLV.
WASH REQUIREMENTS ..... Wash with soap and water
SPILL OR LEAK PROCEDURES ..... Use absorbent sweeping compound to soak up material, put into container, dispose as hazardous waste
WASTE DISPOSAL METHODS ..... Dispose as hazardous waste in accordance with EPA RCRA
HANDLING & STORAGE ..... Store below 120 °F; keep away from heat, sparks, or open flame
OTHER PRECAUTIONS ..... When spraying more than one half can continuously or more than one can consecutively, use NIOSH approved respirator. Avoid prolonged breathing of vapors. Use with adequate ventilation.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

COCA COLA RED SPRAY PAINT 80-858

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-858
PRODUCT NAME ..... COCA COLA RED SPRAY PAINT
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	REL	ACGIH TLV	%
Acetone (67-64-1)	1000ppm	250ppm	750ppm	19.5
Propane (74-98-6)	1000ppm	1000ppm	2500ppm	15.6
N-Butane (106-97-8)	-	800ppm	800ppm	9.2
Barium Sulfate (7727-43-7)	5mg/m3	5mg/m3	10mg/m3	8.2
Glycol Ether EP (2807-30-9)	-	-	-	5.3
*Methyl Iso-butyl Ketone (108-10-1)	100ppm	75ppm	75ppm	4.9
PM acetate(108-65-6)	-	-	-	3.1
Methyl Propyl Ketone (107-87-9)	200ppm	150ppm	250ppm	3.1
Isobutyl acetate (110-19-0)	150ppm	150ppm	150ppm	2.7
*Xylene (1330-20-7)	100ppm	150ppm	150ppm	2.4

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement.

3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -44°C (-47°F)
VAPOR PRESSURE PSIG @ 70°F ..... 8300.00 hPa
VAPOR DENSITY (AIR = 1) ..... N/A
SOLUBILITY IN WATER ..... Slight
SPECIFIC GRAVITY (H2O = 1) 0.8302
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Ether=1) ..... >1
VOC content (by weight) 47%
APPEARANCE AND ODOR ..... Red liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%) 13.0%
LOWER EXPLOSIVE LIMIT (%) 1.7%
EXTINGUISHING MEDIA ..... Extinguishing powder, CO_2, Sand. Do not use water!
SPECIAL FIREFIGHTING PROCEDURES .. Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/ NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS ..... Vapors may form explosive mixture with air.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin absorption, Inhalation, Ingestion, Eye contact, Skin Contact.
HEALTH HAZARDS ..... (ACUTE AND CHRONIC)
EYE CONTACT ..... Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.
INGESTION ..... This material may be harmful or fatal if swallowed. Irritating to mouth, throat or stomach.
INHALATION ..... Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.
SKIN CONTACT ..... Generally the product doesn't irritate the skin.

5. HEALTH EFFECTS DATA (CONT'D)

MEDICAL CONDITIONS GENERALLY
AGGRAVATED BY EXPOSURE ..... Heart disease, respiratory disorders

FIRST AID PROCEDURES

EYE CONTACT ..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT ..... Wash with soap and water. Get medical attention if irritation develops or persists.
INHALATION ..... Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Rescuers should put on appropriate protective gear. Keep victim warm. Get immediate medical attention.
INGESTION ..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) None

6. REACTIVITY

STABILITY ..... Stable under normal storage conditions.
INCOMPATIBILITIES ..... No dangerous reactions known..
HAZARDOUS DECOMPOSITION PRODUCTS No decomposition if used according to specifications.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS. None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT
REQUIREMENTS ..... Safety goggles. Local exhaust ventilation may be necessary to control air contaminants to within TLVs during the use of this product.
WASH REQUIREMENTS .. Wash with soap and water
SPILL OR LEAK PROCEDURES Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS Dispose of in accordance with local, state, and federal regulations.
HANDLING & STORAGE ... Wash thoroughly after handling. Keep away from heat, sparks and flames. Store below 120°F.
OTHER PRECAUTIONS .... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors, protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstances where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

ENGINE DEGREASER 80-715

HMIS RATING	
Health	2
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	2
Flammability	4
Reactivity	0
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: (614) 228-6701

1. PRODUCT IDENTIFICATION

PART NUMBER 80-715
PRODUCT NAME ..... Engine Degreaser
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
*Xylene (1330-20-7)	100ppm	100ppm	150ppm	20-30
Kerosene (8008-20-6)	400ppm	-	-	20-30
Deionized Water (7732-18-5)	-	-	-	20-30
Propane/Isobutane/n-Butane (74-98-6)	1000ppm	1000ppm	Asphyxia	10-20
*Toluene (108-88-3)	200ppm	50SKIN	150ppm	1-10
Sorbitan Monolaurate (9005-64-5)	—	—	—	1-10
Clay (71011-27-3)	—	—	—	1-10

Acceptable ceiling concentration for toluene - 300ppm; max peak above ceiling - 8 hour shift - 500ppm. Kerosene contains 0.5-1.5% xylene (1330-20-7), 0.5-1.5% Naphthalene (91-20-3), and 0.4-1.2% biphenyl (92-52-4) which are subject to the reporting requirements of Section 313 of SARA Title III. Technical grade xylene contains 18-20% ethyl benzene (100-41-4) which has 100ppm PEL, 100ppm TLV, 125ppm STEL, and is subject to the reporting requirements of Section 313 of SARA Title III.

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -40° to 212°F
VAPOR PRESSURE PSIG @ 70°F 50
VAPOR DENSITY (AIR = 1) 4
SOLUBILITY IN WATER ..... Nil
SPECIFIC GRAVITY (H2O = 1) 0.8
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Butyl Acetate=1) ..... <1
VOC content (by weight) 72.3%
APPEARANCE AND ODOR ..... White / Solvent

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -142°F TCC
UPPER EXPLOSIVE LIMIT (%) 9.5
LOWER EXPLOSIVE LIMIT (%) 1.8
EXTINGUISHING MEDIA ..... Dry chemical, CO_2, water fog, foam
SPECIAL FIREFIGHTING PROCEDURES ..... Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus.
FIRE AND EXPLOSION HAZARDS ..... Heated cans may burst
NFPA FLAMMABILITY HAZARD 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin, Ingestion, Eyes, Inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC) ... May cause dizziness or narcosis in high vapor concentrations. Will cause defatting of the skin. Effects are reversible. Long term exposure (years) to high concentrations of vapor may cause lung, liver, or kidney damage. Aspiration hazard if swallowed. Eye and skin irritant. May irritate respiratory tract. Overexposure to toluene may cause nasal and brain damage. May cause cardiac abnormalities. The solvents listed have been reported to effect the central nervous system. Deliberately inhaling or concentrating the vapor of the contents may be harmful or fatal.

5. HEALTH EFFECTS DATA (CONTINUED)

SIGNS & SYMPTOMS OF EXPOSURE ..... Inhalation: difficulty in breathing; Skin: redness; Ingestion: vomiting
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ... Heart disease; Respiratory disorders. May cause cardiac abnormalities. Overexposure to toluene may cause nasal and brain damage.

FIRST AID PROCEDURES

EYES ..... Flush with water for at least 15 minutes;
SKIN CONTACT ..... Wash with soap, large volumes of water;
INGESTION ..... Do not induce vomiting; keep individual calm; obtain medical attention; never administer adrenalin following overexposure
INHALATION ..... Remove to fresh air

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) Toluene is a chemical known to the State of California to cause cancer and reproductive toxicity

6. REACTIVITY

STABILITY ..... Stable
INCOMPATIBILITIES ..... High temperatures, strong oxidizers, reducers
HAZARDOUS DECOMPOSITION PRODUCTS ..... CO_2
HAZARDOUS POLYMERIZATION ..... Will not occur
HAZARDOUS POLYMERIZATION CONDITIONS ..... None known
NFPA REACTIVITY HAZARD 0

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety glasses, ventilation sufficient to maintain vapor concentrations below TLV.
WASH REQUIREMENTS ..... Wash with soap and water
SPILL OR LEAK PROCEDURES ..... Use absorbent sweeping compound to soak up material, put into container, dispose as hazardous waste
WASTE DISPOSAL METHODS ..... Dispose as hazardous waste in accordance with EPA RCRA
HANDLING & STORAGE ..... Store below 120°F. Keep away from heat, sparks, or open flame
OTHER PRECAUTIONS ..... When spraying more than half a can continuously or more than one can consecutively, use NIOSH approved respirator

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

80-952 GASKETEX *NON-CHLORINATED* GASKET STRIPPER

HMIS RATING	
Health	3
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	3
Flammability	4
Reactivity	0
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-952
PRODUCT NAME ..... Gasketex Non-Chlorinated Gasket Stripper
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	<%
*2-Butanone (78-93-3)	200 ppm	200ppm	300ppm	35
Propane/Isobutane/n-Butane (68476-86-8)	1000ppm	1000ppm	Asphyxiant	20
*Toluene (108-88-3)	100ppm	50ppm	150ppm	20
Glycol Ether PTB (57018-52-7)	-	-	-	10
4-Hydroxy-4-Methyl-2-Pentanone (123-42-3)	50ppm	50ppm	-	5
4-Methyl-2-Pentanol (108-11-2)	25ppm	25ppm	40ppm	5
*Butyl Cellosolve Acetate (112-07-2)	-	5ppm	-	5
*Butyl Alcohol (71-36-3)	50ppm	-	50ppm	5
Ethanol (64-56-1)	1000ppm	1000ppm	-	5
Pine Oil (8002-09-3)	-	3mg/m³	10mg/m³	5

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -43° to 388°F
VAPOR PRESSURE PSIG @ 70°F 80-90
VAPOR DENSITY (AIR = 1) ..... >1
SOLUBILITY IN WATER ..... Negligible
SPECIFIC GRAVITY (H2O = 1) 0.755
MELTING/FREEZING POINT ..... 32° F
EVAPORATION RATE (Butyl Acetate=1) ..... >1
VOC content (by weight) 98.5%
APPEARANCE AND ODOR ..... Light Amber / Solvent

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -156°F Pensky-Martens CC
UPPER EXPLOSIVE LIMIT (%) 19.0
LOWER EXPLOSIVE LIMIT (%) 1.0
EXTINGUISHING MEDIA ..... Dry chemical, CO_2, water fog, foam.
SPECIAL FIREFIGHTING PROCEDURES ..... Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus; water may be used to cool fire-exposed containers.
FIRE AND EXPLOSION HAZARDS ..... Heated cans may burst. Vapors may flash back.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Eyes, Skin, Inhalation, Ingestion
HEALTH HAZARDS (ACUTE AND CHRONIC) .... May cause dizziness or narcosis in high vapor concentrations. Will cause defatting of the skin. Effects are reversible. Long term exposure (years) to high concentrations of vapor may cause lung, liver, or kidney damage. Aspiration hazard if swallowed. Eye and skin irritant. May irritate respiratory tract. Deliberately inhaling the vapor of the contents may be harmful or fatal. Harmful or fatal if swallowed, corrosive and may cause severe and permanent damage to mouth, throat, and stomach. Skin absorption is possible.

SIGNS & SYMPTOMS OF EXPOSURE ..... Inhalation: difficulty in breathing; Skin: redness; Ingestion: vomiting; Eyes: pain, tearing, redness.

5. HEALTH EFFECTS DATA (CONT'D)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease; respiratory disorders, alcoholism, liver & kidney disease, lung disease, anemia, arrhythmia

FIRST AID PROCEDURES

EYES ..... Flush with water for at least 15 minutes; get medical attention if irritation persists.
SKIN CONTACT ..... Wash with soap, large volumes of water; remove contaminated clothing; get medical attention. Wash clothing before reuse.
INGESTION ..... Give the victim a glass of water or milk. Do not induce vomiting; keep individual calm; obtain immediate medical attention, call a physician or poison control center. Never give anything by mouth to an unconscious person.
INHALATION ..... Remove to fresh air; if not breathing give artificial respiration; give oxygen in event of breathing difficulty; get medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) This product contains the following chemicals known to the State of California to cause cancer, birth defects or other reproductive harm: Toluene, Ethanol.

6. REACTIVITY

STABILITY ..... Stable
INCOMPATIBILITIES ..... High temperatures, strong acids, alkalis, oxidizers, and amines, oxygen, nitrogen peroxide, sodium, potassium, reactive metals, aluminum.
HAZARDOUS DECOMPOSITION PRODUCTS ..... CO, CO_2, oxides of nitrogen, hydrogen chloride, phosgene, chlorine
HAZARDOUS POLYMERIZATION ..... Will not occur
HAZARDOUS POLYMERIZATION CONDITIONS.....None known
NFPA REACTIVITY HAZARD 0

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Chemical goggles or face shield. Chemical resistant gloves. Local exhaust fan required. Use NIOSH approved respirator if TLV limit is exceeded. Long sleeves and pants.
WASH REQUIREMENTS ... Wash with soap and water
SPILL OR LEAK PROCEDURES Use absorbent sweeping compound to soak up material, put into container, dispose as hazardous waste
WASTE DISPOSAL METHODS Dispose as hazardous waste in accordance with EPA RCRA
HANDLING & STORAGE ..... Store below 120 °F; keep away from heat, sparks, or open flame
OTHER PRECAUTIONS .... When spraying more than one half can continuously or more than one can consecutively, use NIOSH approved respirator

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

80-934 GELLED VANDALISM MARK REMOVER

HMIS RATING	
Health	2
Flammability	4
Reactivity	0

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	2
Flammability	4
Reactivity	0
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-934
PRODUCT NAME ..... Gelled Vandalism Mark Remover
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	STEL	%
Propane/Isobutane /n-Butane (68476-86-8)	800ppm	800ppm	-	25
Kerosene (8008-20-6)	400ppm	400ppm	-	25
Dimethylbenzene (1330-20-7)	100ppm	100ppm	150ppm	20
Ethylbenzene (100-41-4)	100ppm	100ppm	125ppm	10
*Toluene (108-88-3)	100ppm	50ppm	150ppm	5
Clay (not listed)	10mg/m3	10mg/m3	-	5

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -43° to 522°F
VAPOR PRESSURE PSIG @ 70°F 80-90
VAPOR DENSITY (AIR = 1) ..... >1
SOLUBILITY IN WATER ..... Complete
SPECIFIC GRAVITY (H2O = 1) 0.77
MELTING/FREEZING POINT 32
EVAPORATION RATE (Butyl Acetate=1) ..... >1
VOC content (by weight) ..... 4.73 Lbs/gal
APPEARANCE AND ODOR ..... tan emulsion/ammonia

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -156°F TCC
UPPER EXPLOSIVE LIMIT (%) 9.5
LOWER EXPLOSIVE LIMIT (%) 0.8
EXTINGUISHING MEDIA ..... Dry chemical, CO_2, water fog, foam, alcohol foam
SPECIAL FIREFIGHTING PROCEDURES ..... Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus; water may be used to cool fire-exposed containers.
FIRE AND EXPLOSION HAZARDS ..... Heated cans may burst. vapors can travel to a source of ignition and flash back. "Empty" containers retain product residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Eyes, Inhalation, Ingestion, Ingestion
HEALTH HAZARDS (ACUTE AND CHRONIC) ..
EYE CONTACT: ..... Irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling of dust in the eyes.
SKIN CONTACT: ..... Contact can result in defatting or drying of the skin which may result in skin irritation and rash.
INHALATION: ..... Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result.
INGESTION: ..... Harmful or fatal if swallowed. Corrosive and may cause severe and permanent damage to mouth, throat and stomach.
CHRONIC HAZARDS: ..... Overexposure may cause damage to the nervous system, lungs and kidneys.

5. HEALTH EFFECTS DATA (CONT'D)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease, respiratory disorders, Central Nervous System Depression.

FIRST AID PROCEDURES

EYE CONTACT: ..... Flush eyes with plenty of water ; obtain medical attention.
SKIN CONTACT: ..... Wash with soap, large volumes of water; remove contaminated clothing.
INGESTION: ..... Do not induce vomiting. Give the victim a glass of milk or water. Obtain medical attention. Never give anything by mouth to an unconscious person.
INHALATION: ..... Remove to fresh air; seek immediate medical attention; if breathing stops, begin artificial respiration; administer oxygen; obtain medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) This product contains Toluene a chemical known to the State of California to cause birth defects or other reproductive harm. Never administer adrenaline following overexposure.

6. REACTIVITY

STABILITY ..... Stable under normal storage conditions.
INCOMPATIBILITIES ..... Heat, sparks, flame and other sources of ignition, strong oxidizing agents, acids, strong alkalis.
HAZARDOUS DECOMPOSITION PRODUCTS ..... Oxides of carbon, nitrogen and may produce forms of chloride, chlorine and phosgene.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS.....None known.

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety glasses, ventilation sufficient to maintain vapor concentrations below TLV. Use NIOSH approved respirator if TLV limit is exceeded. Wear long sleeves and pants.
WASH REQUIREMENTS .. Wash with soap and water.
SPILL OR LEAK PROCEDURES Use absorbent sweeping compound to soak up material, put into container, dispose as hazardous waste.
WASTE DISPOSAL METHODS Dispose as hazardous waste in accordance with EPA, RCRA.
HANDLING & STORAGE ... Store below 120°F. Keep away from heat, sparks, or open flame.
OTHER PRECAUTIONS .... When spraying more than one half can continuously or more than one can consecutively, use NIOSH approved respirator.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

80-881 ULTRA PRO•MAX GLOSS BLACK PAINT

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE & EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-880
PRODUCT NAME ..... ULTRA PRO •MAX GLOSS BLACK PAINT 16OZ AEROSOL CAN
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	REL	ACGIH TLV	%
Acetone (00067-64-1)	1000ppm	250ppm	750ppm	22.6
Propane (00074-98-6)	1000ppm	1000ppm	2500ppm	15.7
N-Butane (00106-97-8)	-	800ppm	800ppm	9.2
Barium Sulfate (07727-43-7)	5mg/m3	5mg/m3	10mg/m3	8.5
*Gycol Ether EP (02807-30-9)	-	-	-	5.4
*Methyl Iso-butyl Ketone (00108-10-1)	100ppm	75ppm	75ppm	5.1
Methyl Propyl Ketone (00107-87-9)	200ppm	150ppm	250ppm	3.4
*Xylene (01330-20-7)	100ppm	150ppm	150ppm	2.7
PM Acetate (108-65-6)	-	-	-	1.7
Isobutyl Acetate (110-19-00)	150ppm	150ppm	150ppm	1.4

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement.

3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -44°C (-47°F)
VAPOR PRESSURE PSIG @ 70°F ..... 8300.00 hPa
VAPOR DENSITY (AIR = 1) ..... N/A
SOLUBILITY IN WATER ..... Slight
SPECIFIC GRAVITY (H2O = 1) 0.8267
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Ether=1) ..... >1
VOC content (by weight) 46%
APPEARANCE AND ODOR ..... Black liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%) 13.0%
LOWER EXPLOSIVE LIMIT (%) 1.7%
EXTINGUISHING MEDIA ..... Extinguishing powder, CO_2, Sand. Do not use water!
SPECIAL FIREFIGHTING PROCEDURES ..... Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS ..... Vapors may form explosive mixture with air.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin absorption, Inhalation, Ingestion, Eye contact, Skin contact
HEALTH HAZARDS (ACUTE AND CHRONIC)
EYE CONTACT ..... Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.
INGESTION ..... This material may be harmful or fatal if swallowed. Irritating to mouth, throat or stomach.
INHALATION ..... Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.
SKIN CONTACT ..... Generally the product doesn't irritate the skin.

5. HEALTH EFFECTS DATA (CONT'D)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease, respiratory disorders.

FIRST AID PROCEDURES

EYE CONTACT ..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT ..... Wash with soap and water. Get medical attention if irritation develops or persists.
INGESTION ..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
INHALATION ..... Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Rescuers should put on appropriate protective gear. Keep victim warm. Get immediate medical attention.

SPECIAL HEALTH EFFECTS
CARCINOGEN (OSHA Guidelines) None

6. REACTIVITY

STABILITY ..... Stable under normal conditions.
INCOMPATIBILITIES ..... No dangerous reactions known.
HAZARDOUS DECOMPOSITION ..... No decomposition if used according to specifications.
PRODUCTS ..... Fumes may contain CO_2, CO.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions
HAZARDOUS POLYMERIZATION CONDITIONS.....None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety goggles. Local exhaust ventilation may be necessary to control contaminants to within TLVs during the use of this product.
WASH REQUIREMENTS ... Wash with soap and water.
SPILL OR LEAK PROCEDURES Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS Dispose of in accordance with local, state, and federal regulations
HANDLING & STORAGE ... Wash thoroughly after handling. Keep away from heat, sparks and flames. Store below 120°F.
OTHER PRECAUTIONS .... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors, protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Your Partner in Performance

ULTRA PRO•MAX GLOSS WHITE PAINT 80-880

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE TELEPHONE: 614-219-6100
EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER 80-880
PRODUCT NAME ..... ULTRA PRO• MAX GLOSS WHITE PAINT 16OZ AEROSOL CAN
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	REL	%
Acetone (00067-64-1)	1000ppm	250ppm	750ppm	17.8
Propane (00074-98-6)	1000ppm	1000ppm	2500ppm	15.7
Titanium Dioxide (13463-67-7)	-	-	-	12.1
N-Butane (00106-97-8)	-	800ppm	800ppm	9.3
Barium Sulfate (07727-43-7)	5mg/m^3	5mg/m^3	10mg/m^3	5.0
*Methyl Iso-butyl Ketone (00108-10-1)	100ppm	75ppm	75ppm	4.9
Gycol Ether EP (02807-30-9)	-	-	-	4.8
Isobutyl Acetate (110-19-0)	150ppm	150ppm	150ppm	4.8
Methyl Propyl Ketone (00107-87-9)	200ppm	150ppm	250ppm	3.4
*Xylene (01330-20-7)	100ppm	150ppm	150ppm	2.4

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -44°C (-47°F)
VAPOR PRESSURE PSIG @ 70°F ..... 8300.00 hPa
VAPOR DENSITY (AIR = 1) ..... N/A
SOLUBILITY IN WATER ..... Slight
SPECIFIC GRAVITY (H2O = 1) 0.8725
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Ether=1) ..... >1
VOC content (by weight) 46%
APPEARANCE AND ODOR ..... White liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%) 10.9%
LOWER EXPLOSIVE LIMIT (%) 1.7%
EXTINGUISHING MEDIA ..... Extinguishing powder, CO_2, Sand.
SPECIAL FIREFIGHTING PROCEDURES ..... Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS ..... Vapors may form explosive mixture with air.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY ..... Skin absorption, Inhalation, Ingestion, Eye contact, Skin contact

HEALTH HAZARDS (ACUTE AND CHRONIC)

EYE CONTACT ..... Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.
INGESTION ..... This material may be harmful or fatal if swallowed. Irritating to mouth, throat or stomach.
INHALATION ..... Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor. Prolonged inhalation may be harmful.
SKIN CONTACT ..... Generally does not irritate the skin.

5. HEALTH EFFECTS DATA CON'T

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease, respiratory disorders.

FIRST AID PROCEDURES

EYE CONTACT ..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT ..... Wash with soap and water. Get medical attention if irritation develops or persists.
INGESTION ..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
INHALATION ..... Remove to fresh air; seek immediate medical attention; if breathing stops, begin artificial respiration; administer oxygen; obtain medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) None

6. REACTIVITY

STABILITY ..... Stable under normal conditions.
INCOMPATIBILITIES ..... No dangerous reactions known
HAZARDOUS DECOMPOSITION ..... No decomposition if used according to specifications.
PRODUCTS ..... Fumes may contain CO_2, CO.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions
HAZARDOUS POLYMERIZATION CONDITIONS ..... None known

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety goggles. Local exhaust ventilation may be necessary to control contaminants to within TLVs during the use of this product.
WASH REQUIREMENTS ..... Wash with soap and water.
SPILL OR LEAK PROCEDURES Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS Dispose of in accordance with local, state, and federal regulations
HANDLING & STORAGE ..... Wash thoroughly after handling. Keep away from heat, sparks and flames. Store below 120°F.
OTHER PRECAUTIONS ..... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors, protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

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KIMBALL MIDWEST

Specializing in Materials Management since 1923

ULTRA PRO•MAX GLOSS YELLOW PAINT 80-888

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

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1. PRODUCT IDENTIFICATION

PART NUMBER 80-888
PRODUCT NAME ..... ULTRA PRO• MAX GLOSS YELLOW PAINT 16OZ AEROSOL CAN
CHEMICAL FAMILY ..... N/A
DOT SHIPPING ..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	REL	%
Acetone (00067-64-1)Acetone (00067-64-1)	1000ppm	250ppm	750ppm	19.2
Propane (00074-98-6)	1000ppm	1000ppm	2500ppm	15.7
N-Butane (00106-97-8)	-	800ppm	800ppm	9.2
Barium Sulphate, natural (07727-43-7)	5mg/m^3	5mg/m^3	10mg/m^3	8.1
Glycol Ether EP (02807-30-9)	-	-	-	5.2
*Methyl Iso-butyl Ketone (00108-10-1)	100ppm	75ppm	75ppm	5.0
Titanium Dioxide (13463-67-7)	-	-	-	4.0
Methyl Propyl Ketone (00107-87-9)	200ppm	150ppm	250ppm	3.2
Isobutyl acetate (00100-41-4)	150ppm	150ppm	150ppm	2.6
*Xylene (01330-20-7)	100ppm	150ppm	150ppm	2.4
PM acetate (108-65-6)	-	-	-	2.1
Novaperm Yellow Pigment (82199-12-0)	-	-	-	1.3

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3. PHYSICAL DATA

BOILING POINT (RANGE) ..... -44°C to (-47°F)
VAPOR PRESSURE PSIG @ 70°F ..... 8300.00 hPa
VAPOR DENSITY (AIR = 1) ..... N/A
SOLUBILITY IN WATER ..... Slight
SPECIFIC GRAVITY (H2O = 1) 0.8516
MELTING/FREEZING POINT ..... N/A
EVAPORATION RATE (Ether=1) ..... >1
VOC content (by weight) 46.5%
APPEARANCE AND ODOR ..... Yellow liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT ..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%) 10.9%
LOWER EXPLOSIVE LIMIT (%) ... 1.7%
EXTINGUISHING MEDIA ..... Extinguishing powder, CO_2, Sand. Fight larger fires with water spray or alcohol resistant foam.
SPECIAL FIREFIGHTING PROCEDURES Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS Vapors may form explosive mixture with air.
NFPA Flammability Hazard 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY Skin absorption, Inhalation, Ingestion, Eye contact, Skin contact

HEALTH HAZARDS (ACUTE AND CHRONIC)

EYE CONTACT ..... Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of a fine dust in the eyes.

INGESTION ..... This material may be harmful or fatal if swallowed. Irritating to mouth, throat or stomach.

INHALATION Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.

SKIN CONTACT ..... Generally the product doesn't irritate the skin.

5. HEALTH EFFECTS DATA CON'T

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE ..... Heart disease, respiratory disorders.

FIRST AID PROCEDURES

EYE CONTACT ..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN CONTACT ..... Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION ..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

INHALATION ..... Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Rescuers should put on appropriate protective gear. Keep victim warm. Get immediate medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines) None

6. REACTIVITY

STABILITY ..... Stable under normal conditions.
INCOMPATIBILITIES ..... No information.
HAZARDOUS DECOMPOSITION ..... No decomposition if used according to specifications.
PRODUCTS ..... Fumes may contain CO_2, CO.
HAZARDOUS POLYMERIZATION ..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS ..... None known.

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS ..... Safety goggles. Local exhaust ventilation may be necessary to control air contaminants to within TLVs during the use of this product.

WASH REQUIREMENTS ..... Wash with soap and water.

SPILL OR LEAK PROCEDURES Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.

WASTE DISPOSAL METHODS Dispose of in accordance with local, state, and federal regulations.

HANDLING & STORAGE ..... Wash thoroughly after handling. Keep away from heat, sparks, and flames. Store below 120°F.

OTHER PRECAUTIONS ..... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors; protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

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KIMBALL MIDWEST

Specializing in Materials Management since 1923

I. PRODUCT IDENTIFICATION

Chemical/Trade Name (as used on label):

Lead-Acid Battery

Chemical Family/Classification:

Electric Storage Battery

Manufacturer's Name/Address

Yuasa Battery, Inc.
2901 Montrose Ave.
Laureldale, PA 19605

Telephone

For information and emergencies, contact Yuasa Battery Environmental Dept. (610) 929-5781

24-hour Emergency Response Contact:

CHEMTREC DOMESTIC: 800.424.9300
CHEMTREC INTERNATIONAL: 1.703.527.3887

II. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Components	CAS Number	Approximate % by Wt. or Vol.	Air Exposure Limits ($\mu g/m^3$) OSHA	ACGIH	NIOSH
Inorganic lead Compound:					
Lead	7439-92-1	60	50	150	100
* Antimony	7440-36-0	2	500	500	--
* Arsenic	7440-38-2	0.2	10	200	--
* Calcium	7440-70-2	0.2	--	--	--
* Tin	7440-31-5	0.2	2000	2000	--
Electrolyte (sulfuric acid)	7664-93-9	10-30	1000	1000	1000
Case Material:		5-10	N/A	N/A	N/A
Polypropylene	9003-07-0				
Polystyrene	9003-53-6				
Styrene Acrylonitrite	9003-54-7				
Acrylonitrite Butadiene Styrene	9003-56-9				
Styrene Butadiene	9003-55-8				
Polyvinylchloride	9002-86-2				
Polycarbonate	--				
Hard Rubber	--				
Polyethylene	--				
Plate Separator Material:					
Glass reinforced polyester	--				

- Inorganic lead and electrolyte (sulfuric acid) are the primary components of every battery manufactured by Yuasa Battery, Inc. Other ingredients may be present dependent upon battery type. Contact your Yuasa Battery representative for additional information.

III. PHYSICAL DATA

Electrolyte:

Boiling Point:	203-204°F	Specific Gravity (H2O = 1):	1.215 to 1.350
Melting Point:	Not Applicable	Vapor Pressure (mm Hg):	10
Solubility in Water:	100%	Vapor Density (AIR = 1):	Greater than 1
Evaporation Rate: (Butyl acetate = 1)	Less than 1	% Volatile by Weight:	Not Applicable
Appearance and Odor:	Manufactured article; no apparent odor. Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.		

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable Flammable Limits: LEL = 4.1% (Hydrogen Gas) UEL = 74.2%

Extinguishing media: CO2; foam; dry chemical

Special Fire Fighting Procedures: If batteries are on charge, shut off power. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to spatter. Wear acid-resistant clothing.

Unusual Fire and Explosion hazards: Highly flammable hydrogen gas is generated during charging and operation of batteries. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. Follow manufacturer's instructions for installation and service.

V. REACTIVITY DATA

Stability: Stable _X_ Unstable ___

Conditions to Avoid: Prolonged overcharge; sources of ignition

Incompatibility: (materials to avoid)

Sulfuric acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

Lead compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.

Hazardous Decomposition Products:

Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen.

Lead compounds: High temperatures likely to produce toxic metal fume, vapor or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

VI. HEALTH HAZARD DATA

Routes of Entry:

Sulfuric acid: Harmful by all routes of entry.

Lead compounds: Hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapor or fume.

Inhalation:

Sulfuric acid: Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.

Lead compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

Ingestion:

Sulfuric acid: May cause severe irritation of mouth, throat, esophagus and stomach.

Lead compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician.

Skin Contact:

Sulfuric acid: Severe irritation, burns and ulceration.

Lead compounds: Not absorbed through the skin.

Eye Contact:

Sulfuric acid: Severe irritation, burns, cornea damage, and blindness.

Lead compounds: May cause eye irritation.

Effects of Overexposure - Acute:

Sulfuric acid: Severe skin irritation, damage to cornea, upper respiratory irritation.

Lead compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

Effects of Overexposure - Chronic:

Sulfuric acid: Possible erosion of tooth enamel, inflammation of nose, throat and bronchial tubes.

Lead compounds: Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in males and females.

Carcinogenicity:

Sulfuric acid: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category I carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist.

Lead compounds: Lead is listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.

Arsenic: Listed by National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), OSHA and NIOSH as a carcinogen only after prolonged exposure at high levels.

Medical Conditions Generally Aggravated by Exposure:

Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulfuric acid with skin may aggravate skin diseases such as eczema and contact dermatitis. Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

Emergency and First Aid Procedures:

Inhalation:

Sulfuric acid: Remove to fresh air immediately. If breathing is difficult, give oxygen.

Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

Ingestion:

Sulfuric acid: Give large quantities of water; do not induce vomiting; consult physician.

Lead: Consult physician immediately.

Skin:

Sulfuric acid: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes.

Lead: Wash immediately with soap and water.

Eyes:

Sulfuric acid and lead: Flush immediately with large amounts of water for at least 15 minutes; consult physician.

Proposition 65:

Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures:

Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer.

Waste Disposal Methods:

Spent batteries: Send to secondary lead smelter for recycling.

Place neutralized slurry into sealed containers and handle as applicable with state and federal regulations. Large water-diluted spills, after neutralization and testing, should be managed in accordance with approved local, state and federal requirements. Consult state environmental agency and/or federal EPA.

Handling and Storage:

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat.

Precautionary Labeling:

POISON - CAUSES SEVERE BURNS

DANGER - CONTAINS SULFURIC ACID

VIII. CONTROL MEASURES

Engineering Controls:

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant.

Work Practices:

Handle batteries cautiously to avoid spills. Make certain vent caps are on securely. Avoid contact with internal components. Wear protective clothing when filling or handling batteries.

Respiratory Protection:

None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.

Protective gloves:

Rubber or plastic acid-resistant gloves with elbow-length gauntlet.

Eye Protection:

Chemical goggles or face shield.

VIII. CONTROL MEASURES (continued)

Other Protection:

Acid-resistant apron. Under severe exposure or emergency conditions, wear acid-resistant clothing and boots.

Emergency Flushing:

In areas where sulfuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

IX. OTHER REGULATORY INFORMATION

NFPA Hazard Rating for sulfuric acid:

Flammability (Red)	=	0
Health (Blue)	=	3
Reactivity (Yellow)	=	2

Sulfuric acid is water-reactive if concentrated.

U.S. DOT

The transportation of wet and moist charged (moist active) batteries within the continental United States is regulated by the U.S. DOT through the Code of Federal Regulations, Title 49 (CFR 49). These regulations classify these types of batteries as a hazardous material. Refer to CFR 49, 173.159 for more details pertaining to the transportation of wet and moist batteries. The shipping information is as follows:

Proper Shipping Name:	Batteries, wet, filled with acid
Hazardous Class:	8
UN Identification:	UN2794
Packing Group:	III
Label / Placard Required:	Corrosive

Some Yuasa Battery batteries have been tested and meet the non-spillable criteria listed in CFR 49, 173.159 (d) (3) (i) and (ii). Non-spillable batteries are excepted from CFR 49, Subchapter C requirements, provided that the following criteria are met:

1. The batteries must be protected against short circuits and securely packaged.
2. The batteries and their outer packaging must be plainly and durably marked “NON-SPILLABLE” or “NON-SPILLABLE BATTERY”.

The exception from CFR 49, Subchapter C translates to no proper shipping name, no hazardous class, no UN number, no packing group and no hazardous labels when transporting a non-spillable battery.

Contact your Yuasa Battery representative for additional informational regarding the classification of batteries.

IATA

The international transportation of wet and moist charged (moist active) batteries is regulated by the International Air Transport Association (IATA). These regulations also classify these types of batteries as a hazardous material. The batteries must be packed according to IATA Packing Instruction 800. The shipping information is as follows:

Proper Shipping Name: Batteries, wet, filled with acid
Hazardous Class: 8
UN Identification: UN2794
Packing Group: III
Label / Placard Required: Corrosive

Some Yuasa Battery batteries have been tested and meet the non-spillable criteria listed in IATA Packing Instruction 806. Non-spillable batteries must be packed according to IATA Packing Instruction 806. The shipping information for non-spillable batteries is as follows:

Proper Shipping Name: Batteries, wet, non-spillable
Hazardous Class: 8
UN Identification: UN2800
Packing Group: III
Label / Placard Required: Corrosive

In addition, some Yuasa Battery non-spillable batteries have been tested and meet the non-regulated criteria listed in IATA special provision A67. These batteries are excepted from all IATA regulations provided that the batteries' terminals are protected against short circuits.

Contact your Yuasa Battery representative for additional informational regarding the classification of batteries.

IMDG

The international transportation of wet and moist charged (moist active) batteries is regulated by the International Maritime Dangerous Goods code (IMDG). These regulations also classify these types of batteries as a hazardous material. The batteries must be packed according to IMDG code pages 8120 and 8121. The shipping information is as follows:

Proper Shipping Name: Batteries, wet, filled with acid
Hazardous Class: 8
UN Identification: UN2794
Packing Group: III
Label / Placard Required: Corrosive

Some Yuasa Battery batteries have been tested and meet the non-spillable criteria listed on page 8121. Non-spillable batteries must be packed according to IMDG page 8121. The shipping information for non-spillable batteries is as follows:

Proper Shipping Name: Batteries, wet, non-spillable
Hazardous Class: 8
UN Identification: UN2800
Packing Group: III
Label / Placard Required: Corrosive

In addition, some Yuasa Battery non-spillable batteries have been tested and meet the non-regulated criteria listed in the IMDG code page 8121. These batteries are excepted from all IMDG code provided that the batteries' terminals are protected against short circuits.

Contact your Yuasa Battery representative for additional informational regarding the classification of batteries.

RCRA: Spent lead-acid batteries are not regulated as hazardous waste by the EPA when recycled, however state and international regulations may vary.

CERCLA (Superfund) and EPCRA:

(a) Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency Planning Community Right to Know Act) is 1,000 lbs. State and local reportable quantities for spilled sulfuric acid may vary.

(b) Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of 1,000 lbs.

(c) EPCRA Section 302 notification is required if 1,000 lbs. or more of sulfuric acid is present at one site. The quantity of sulfuric acid will vary by battery type. Contact your Yuasa Battery representative for additional information.

(d) EPCRA Section 312 Tier 2 reporting is required for batteries if sulfuric acid is present in quantities of 500 lbs. or more and/or if lead is present in quantities of 10,000 lbs. or more.

(e) Supplier Notification: This product contains toxic chemicals, which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39, the following information is provided to enable you to complete the required reports:

Toxic Chemical	CAS Number	Approximate % by Wt.
Lead	7439-92-1	60
Sulfuric Acid	7664-93-9	10-30
* Antimony	7440-36-0	2
* Arsenic	7440-38-2	0.2

If you distribute this product to other manufacturers in SIC Codes 20 through 39, this information must be provided with the first shipment of each calendar year.

The Section 313 supplier notification requirement does not apply to batteries, which are "consumer products".

* Not present in all battery types. Contact your Yuasa Battery representative for additional information.

TSCA

Ingredients in Yuasa Battery batteries are listed in the TSCA Registry as follows:

Components	CAS Number	TSCA Status
Electrolyte		
Sulfuric Acid (H_2SO_4)	7664-93-9	Listed
Inorganic lead Compound:		
Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate ($PbSO_4$)	7446-14-2	Listed
Antimony (Sb)	7440-36-0	Listed
Arsenic (As)	7440-38-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed

CAA

Yuasa Battery, Inc. supports preventative actions concerning ozone depletion in the atmosphere due to emissions of CFC's and other ozone depleting chemicals (ODC's), defined by the USEPA as Class I substances. Pursuant to Section 611 of the Clean Air Act Amendments (CAAA) of 1990, finalized on January 19, 1993, Yuasa Battery, established a policy to eliminate the use of Class I ODC's prior to the May 15, 1993 deadline.

Retrieving MSDS Sheet for DS-67 PLUS AEROSOL

One Moment Please...

MATERIAL SAFETY DATA SHEET:DS-67 PLUS AEROSOL

DATE OF ISSUE: 06/15/2006 **SUPERCEDES:** 04/24/2000

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
DS-67 PLUS AEROSOL

Chemical Family:
SOLVENT BLEND

Formula Mixture: X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:	Product Code Number	Emergency Phone Number
D Hollas/Chemist	5635	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
METHYLENE CHLORIDE	IRR/CARC	50 PPM 1	25 PPM 2	N/E	75-09-2
LIGHT ALIPHATIC SOLVENT NAPHTHA	IRRITANT	100 PPM $1	500 PPM $2	N/E	64741-66-8
1-METHOXY-2-PROPANOL	IRRITANT	100 PPM 1	N/E 2	150 PPM 1	107-98-2
TOLUENE	IRRITANT	50 PPM 1	100 PPM 2	N/E	108-88-3
MEDIUM ALIPHATIC SOLVENT NAPHTHA	IRRITANT	100 PPM $1	500 PPM $2	N/E	64742-88-7
PROPANE	FLAM/ASPHY	1000 PPM#1	1000 PPM 2	N/E	74-98-6
N-BUTANE	FLAM/ASPHY	1000 PPM#1	N/E 2	N/E	106-97-8

$ STODDARD SOLVENT VALUES

ALIPHATIC HYDROCARBON GASES

SECTION III - PHYSICAL DATA

Boiling Point (f):	103°	**Specific Gravity (H20=1):**	0.69
Vapor Pressure (MM HG):	2295.08	**Color:**	COLORLESS
Vapor Density (Air=1):	2.0	**Odor:**	SWEET

PH @ 100% :	N/A	**Clarity**	TRANSPARENT
% Volatile by Volume:	100	**Evaporation Rate (BU A/C=1):**	76.32
H20 Solubility:	NEGLIGIBLE	**Viscosity:**	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point:	**Flammable Limits:**	**LEL:**	**UEL:**
41°F / SETA FLASH	PRODUCT MIXTURE	0.9%	23%

Extinguishing Media:

Foam:X Alcohol Foam: CO2:X Dry Chemical:X Water Spray: Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT AND/OR LOW-LYING SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. FLAME EXTENSION: > 36 INCHES, BURNBACK: 6 INCHES. THE USE OF WATER SPRAY (F0G) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE.

Health:3 Flammability:3 Instability:0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute(Short Term Exposure)

EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS TEARING, REDNESS, BLURRED VISION, AND A BURNING SENSATION. PROLONGED CONTACT MAY CAUSE SEVERE IRRITATION AND TRANSIENT CORNEAL INJURY. SKIN CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. PROLONGED CONTACT CAN CAUSE SEVERE IRRITATION AND A BURNING SENSATION AND MAY CAUSE DRYING, DEFATTING, AND CRACKING OF THE SKIN RESULTING IN DERMATITIS. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS. INHALATION: CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. AT LOW VAPOR CONCENTRATIONS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, DROWSINESS, WEAKNESS, UNCONCIOUSNESS, POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION, AND MAY BE FATAL. EXCESSIVE EXPOSURE MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. THIS CAN BE ADDITIVE TO THE INCREASE CAUSED BY SMOKING AND OTHER CARBON MONOXIDE SOURCES. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND DIARRHEA. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. AVOID ALCOHOL CONSUMPTION. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

-Chronic (Long Term Exposure)

ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO HYDROCARBON MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSTIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. EXCESSIVE EXPOSURE TO PRODUCT MAY CAUSE CARBOXYHEMOGLOBINEMIA, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN. EFFECTS MAY BE INCREASED BY SMOKING OR OTHER SOURCE OF CARBON MONOXIDE. CHRONIC INHALATION OF SOLVENTS LIKE TOLUENE HAVE CAUSED HEARTBEAT IRREGULARITY, HEARTBEAT INCREASE, AND PERMANENT CENTRAL AND PERIPHERAL NERVOUS SYSTEM DAMAGE, RESULTING IN DECREASED LEARNING ABILITY, LOSS OF MEMORY, PERSONALITY CHANGES, AND DISTURBANCES IN GAIT. A CONDITION KNOWN AS "PAINTER'S SYNDROME" CAN OCCUR CAUSING A LOSS OF SENSATION IN THE ARMS AND HANDS (PERIPHERAL NEUROPATHY). PROLONGED OR REPEATED EXPOSURE MAY CAUSE CARDIAC SENSITIZATION. MAY CAUSE LIVER AND KIDNEY EFFECTS. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS; PRE-EXISTING LIVER AND KIDNEY DISEASES; PRE-EXISTING HEART DISORDERS. TARGET ORGANS: CENTRAL AND PERIPHERAL NERVOUS SYSTEM, LIVER, KIDNEY, AUDITORY SYSTEM, BLOOD-FORMING ORGANS, AND HEART. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: Inhalation:X Ingestion: Absorption:X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

CHLORINATED HYDROCARBONS MAY SENSITIZE THE HEART TO EPINEPHRINE AND OTHER CIRCULATING CATECHOLAMINES SO THAT ARRHYTHMIAS MAY OCCUR. CAREFUL CONSIDERATION OF THIS POTENTIAL ADVERSE EFFECT SHOULD PRECEDE ADMINISTRATION OF EPINEPHRINE OR OTHER CARDIAC STIMULANTS AND THE SELECTION OF BRONCHODILATORS. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes **NTP:** Yes **OSHA:** No **ACGIH:** Yes **OTHER:** No

VOC CONTENT: 84.9% BY WEIGHT; 92.4% BY VOLUME; 585 G/L

METHYLENE CHLORIDE
ORL-HMN LDLo: 357 MG/KG 4.
ORL-RAT LD50: 1600 MG/KG 4.
SKN-RBT SDT: 100 MG/24H MODERATE 4.
EYE-RBT SDT: 162 MG MODERATE 4.
IHL-RAT LC50: 52 G/M3 4.
IHL-HMN TCLo: 500 PPM/8H 4.

TUMORIGENIC DATA
IHL-RAT TCLo: 3500 PPM/6H/2Y-I 4.

REPRODUCTIVE DATA
IHL-RAT TCLo: 4500 PPM/24H/FEMALE 1-17 DAYS AFTER CONCEPTION 4.

CARCINOGENICITY
ACGIH GROUP A3: CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS
IARC GROUP 2B: ANIMAL SUFFICIENT EVIDENCE; HUMAN INADEQUATE EVIDENCE
NTP: REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN

METHYLENE CHLORIDE HAS BEEN EVALUATED FOR POSSIBLE CANCER CAUSING EFFECTS IN LABORATORY ANIMALS. INHALATION STUDIES AT CONCENTRATIONS OF 2000 AND 4000 PPM INCREASED THE INCIDENCE OF MALIGNANT LIVER AND LUNG TUMORS IN MICE. THREE INHALATION STUDIES OF RATS HAVE SHOWN INCREASED INCIDENCE OF BENIGN MAMMARY GLAND TUMORS IN FEMALE RATS AT CONCENTRATIONS OF 500 PPM AND ABOVE AND INCREASES IN BENIGN MAMMARY GLAND TUMORS IN MALES AT CONCENTRATIONS OF 1500 PPM AND ABOVE. RATS EXPOSED TO 50 AND 200 PPM VIA INHALATION SHOWED NO INCREASED INCIDENCE OF TUMORS. MICE AND RATS EXPOSED BY INGESTION AT LEVELS UP TO 250 MG/KG/DAY LIFETIME AND HAMSTERS EXPOSED VIA INHALATION TO CONCENTRATIONS UP TO 35OO PPM LIFETIME DID NOT SHOW AN INCREASED INCIDENCE OF TUMORS. 5.

EPIDEMIOLOGY STUDIES OF 751 HUMANS CHRONICALLY EXPOSED TO METHYLENE CHLORIDE IN THE WORKPLACE OF WHICH 252 WERE EXPOSED FOR A MINIMUM OF 20 YEARS DID NOT DEMONSTRATE ANY INCREASE IN DEATHS CAUSED BY CANCER OR CARDIAC PROBLEMS. A SECOND STUDY OF 2227 WORKERS CONFIRMED THESE
RESULTS. 5.

LABORATORY ANIMAL STUDIES ON MICE, RATS, AND RABBITS HAVE BEEN CONDUCTED TO EVALUATE THE POTENTIAL REPRODUCTIVE AND DEVELOPMENTAL EFFECTS OF METHYLENE CHLORIDE EXPOSURES. METHLYENE CHLORIDE EXPOSURE HAS NOT BEEN SHOWN TO CAUSE TERATOGENIC EFFECTS (BIRTH DEFECTS) IN EXPERIMENTAL ANIMALS. 5.

LIGHT ALIPHATIC SOLVENT NAPHTHA
ORL-RAT TDLo: 10 GM/KG/4W-I 4.
IHL-RAT TCLo: 7500 PPM/13W-I 4.

1-METHOXY-2-PROPANOL
IHL-RAT LC50: 10,000 PPM/5H 5.
ORL-RAT LD50: 7200 MG/KG 4.
SKN-RBT LD50: 13 G/KG 5.

SKN-RBT OPEN IRRITATION TEST: 500 MG MILD 5.
EYE-RBT SDT: 500 MG/24H MILD 5.

TOLUENE
EYE-RBT SDT: 870 UG MILD 4.
SKN-RBT SDT: 20 MG/24H MODERATE 4.
SKN-RBT LD50: 12.2 G/KG 4.
ORL-HMN LDLo: 50 MG/KG 4.
ORL-RAT LD50: 636 MG/KG 4.
IHL-RAT LC50: 49 GM/M3/4H 4.

ANIMAL STUDIES HAVE SHOWN THAT REPEATED INHALATION OF HIGH LEVELS PRODUCED HISTOLOGICAL CHANGES IN THE BRAIN, DEGENERATION OF THE HEART TISSUE, CARDIAC SENSITIZATION, AND POSSIBLE IMMUNE SYSTEM SUPPRESSION. INTENTIONAL ABUSE OF TOLUENE VAPORS HAS BEEN LINKED TO DAMAGE OF THE BRAIN, KIDNEY, AND LIVER. 5.

MANY CASE STUDIES INVOLVING ABUSE DURING PREGNANCY INDICATE THAT TOLUENE CAN CAUSE BIRTH DEFECTS, GROWTH RETARDATION, AND LEARNING DIFFICULTIES. 5.

MEDIUM ALIPHATIC SOLVENT NAPHTHA
ORL-RAT LD50: >25 ML/KG 5.
IHL-RAT LC50: >710 PPM/4HR 5.
SKN-RBT LD50: 5 ML/KG 5.
SKN-RBT: MODERATE IRRITATION 5.
EYE-RBT: NEGLIGIBLE IRRITATION 5.

AT VERY HIGH ORAL DOSES, THIS PRODUCT CAUSED REVERSIBLE DAMAGE TO THE STOMACH, LIVER, AND KIDNEY OF MALE RATS. 5.

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. IN ONE OF THE STUDIES, A LOW GRADE ANEMIA WAS ALSO OBSERVED. 5.

THIS PRODUCT IS FORMULATED WITH PETROLEUM DISTILLATES WHICH ARE CONSIDERED TO BE SEVERELY REFINED AND NOT CONSIDERED TO BE CARCINOGENIC UNDER IARC. 5.

PROPANE
IHL-LC50 >40% BY VOLUME 5.

N-BUTANE
IHL-RAT LC50: 658 G/M3/4H 4.

HUMAN VOLUNTEERS EXPOSED REPEATEDLY TO GASES OF SIMILAR HYDROCARON MIXTURES RANGING FROM 250 TO 1000 PPM EXHIBITED NO CARDIAC OR PULMONARY FUNCTION ABNORMALITIES. 5.

SECTION VII - REACTIVITY DATA

Stability: Stable:X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS, AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH, CONCENTRATED HYDROGEN PEROXIDE, AND NITROGEN PEROXIDE; ALKALIES; AMINES; OXYGEN; WATER; RECTIVE POWDERED METALS SUCH AS ALUMINUM, COPPER, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS.

Hazardous Decomposition Products:

OXIDES OF CARBON; HYDROGEN CHLORIDE GAS, PHOSGENE GAS, CHLORINE GAS, HYDROCHLORIC ACID, ALDEHYDES, KETONES, AND ORGANIC ACIDS.

Hazardous Polymerization: May Occur: Will Not Occur:X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE CLOTHING, ELIMINATE IGNITION SOURCES OF ELECTRICAL, STATIC, OR FRICTIONAL SPARKS, VENTILATE THE AREA, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CARE AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS OR VAPORS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:

RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:

POLYVINYL ALCOHOL GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:

CHEMICAL GOGGLES SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors:X Outdoors: Heated: Refrigerated:

Minimum Temperature:35°F. Maximum Temperature:120°F.

Precautions to be taken in Handling and Storing:

USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
METHYLENE CHLORIDE	75-09-2	20
TOLUENE	108-88-3	15

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III& of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PLEASE CALL 1-800-527-9919 FOR ADDITIONAL INFORMATION IF YOU ARE A CALIFORNIA CUSTOMER.

THIS MSDS IS NOT INTENDED FOR USERS IN THE STATE OF CALIFORNIA

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2006.
2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR.
4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2006.
5. VENDORS MSDS.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC: CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC: INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT: MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, PNOR: PARTICULATES NOT OTHERISE REGULATED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL: INHALATION, HMN:HUMAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION.HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product."

NFPA Hazard Rating: **(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Aerosol Level (NFPA 30B): 3

PYROIL® POWER STEERING FLUID
PYPSF12P

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	PYROIL® POWER STEERING FLUID
Product code	PYPSF12P
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	64742-65-0	>=90-<=100%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Keep containers closed when not in use.Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA		**64742-65-0**	
OSHA Z1	Permissible exposure limit	500 ppm	
OSHA Z1	Permissible exposure limit	2,000 mg/m3	
NIOSH	Recommended exposure limit (REL):	5 mg/m3	Mist.
NIOSH	Short term exposure limit	10 mg/m3	Mist.
OSHA Z1	Permissible exposure limit	5 mg/m3	Mist.
ACGIH	time weighted average	5 mg/m3	Inhalable fraction.
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED			
NIOSH	Recommended exposure limit (REL):	5 mg/m3	Mist.
NIOSH	Short term exposure limit	10 mg/m3	Mist.
OSHA Z1	Permissible exposure limit	5 mg/m3	Mist.
ACGIH	time weighted average	5 mg/m3	Inhalable fraction.

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	amber
Odour	no data available
Boiling point/boiling range	424.99 °F / 218.33 °C @ 1,013.33 hPa Calculated Phase Transition Liquid/Gas
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	347.00 °F / 175.00 °C Open Cup
Ignition temperature	no data available
Evaporation rate	(>)1 Ethyl Ether
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	0.000 hPa Calculated Vapor Pressure
Relative vapour density	no data available
Density	0.87 g/cm3 7.2200 lb/gal @ 60.00 °F / 15.56 °C
Bulk density	No data
Water solubility	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available

Minimum ignition energy no data available

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
None known.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	LD 50 Rat: > 5,000 mg/kg

Acute inhalation toxicity

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Acute dermal toxicity

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	LD 50 Rabbit: > 5,000 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Bioaccumulation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Ecotoxicity effects

Toxicity to fish

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Toxicity to algae

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Toxicity to bacteria

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Biochemical Oxygen Demand (BOD)

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Chemical Oxygen Demand (COD)

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

Additional ecological information

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
Acute Health Hazard

New Jersey RTK Label Information

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	64742-65-0

Pennsylvania RTK Label Information

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PA HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	64742-65-0

Notification status

US. Toxic Substances Control Act	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Japan. Kashin-Hou Law List	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

MATERIAL SAFETY DATA SHEET
76 Multiplex Red Grease 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 76 Multiplex Red Grease 2
Product Code: 5434020000
Sap Code:
Intended Use: Grease
Chemical Family: Petroleum Hydrocarbon
Responsible Party: Phillips 66 Company
Lubricants Division
P.O. Box 25376
Santa Ana, CA 92799-5376
For Additional MSDSs: 800-762-0942
Technical Information:

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident
Call CHEMTREC
North America: (800)424-9300
Others: (703)527-3887 (collect)

California Poison Control System: (800) 356-3129

Health Hazards/Precautionary Measures: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Smooth dark red
Physical Form: Semi-solid
Odor: Mild, bland petroleum

NFPA Hazard Class:

Health: 1 (Slight)
Flammability: 1 (Slight)
Reactivity: 0 (Least)

HMIS Hazard Class

Not Evaluated

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% WEIGHT	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Sulfurized Isobutylene CAS# 68511-50-2	1-5	Not Established		
Zinc Compound CAS# Proprietary	1-2	Not Established		

OTHER COMPONENTS	% WEIGHT	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Lubricant Base Oil (Petroleum) CAS# Various	80-90	(See: Oil Mist, If Generated)		
Additives CAS# Proprietary	10-20	Not Established		

REFERENCE	EXPOSURE GUIDELINE		
	Limits	Agency	Type
Oil Mist, If Generated CAS# None	5 mg/m3	ACGIH	TWA
	10 mg/m3	ACGIH	STEL
	5 mg/m3	OSHA	TWA
	2500 mg/m3	NIOSH	IDLH

All components are listed on the TSCA inventory

The base oil for this product can be a mixture of any of the following highly refined petroleum streams: CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): No data available. However, inhalation is not an expected route of exposure.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea and diarrhea.

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material. See Section 11 for carcinogenicity information of individual components, if any.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Note To Physicians: High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

5. FIRE FIGHTING MEASURES

Flammable Properties:
Flash Point: 450°F/232°C (COC)
OSHA Flammability Class: Not applicable
LEL%: 0.9 / UEL%: 7.0
Autoignition Temperature: No Data
Burn Rate (solids): No Data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily.

Extinguishing Media: Dry chemical, carbon dioxide, foam, water, sand, or earth is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confines spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Notify fire authorities and appropriate federal, state, and local agencies. Cleanup under expert supervision is advised. Minimize dust generation. Sweep up and package appropriately for disposal. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: Inhalation is not an expected route of exposure. However, a NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability).

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Burn Rate (solids only): No Data
Appearance: Smooth dark red
Physical State: Semi-solid
Odor: Mild, bland petroleum
Vapor Pressure (mm Hg): <0.01
Vapor Density (air=1): >5
Boiling Point/Range: No Data
Freezing/Melting Point: No Data
Solubility in Water: Negligible
Specific Gravity: 0.90
Percent Volatile: Negligible
Evaporation Rate (nBuAc=1): <1
Viscosity: 197 cSt @ 40°C
Bulk Density: 7.70
Flash Point: 450°F / 232°C (COC)
Flammable/Explosive Limits (%): LEL: 0.9 / UEL: 7.0

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions To Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen, sulfur, phosphorus, and zinc oxides. . Hydrogen sulfide and alkyl mercaptans may also be released.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Lubricant Base Oil (Petroleum) (CAS# Various)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and dewaxing to remove aromatics and improve performance characteristics. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

12. ECOLOGICAL INFORMATION

Not evaluated at this time

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

14. TRANSPORT INFORMATION

Note: Not classified as hazardous

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health: No
Chronic Health: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

SARA 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
Zinc Compound	Proprietary	1-2

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

--None Known--

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

EPA (CERCLA) Reportable Quantity:

--None--

16. OTHER INFORMATION

Issue Date: 01/01/02
Previous Issue Date: 07/10/00
Product Code: 5434020000
Revised Sections: None
Previous Product Code: 5434020000
MSDS Number: 5434020000

Disclaimer of Expressed and Implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

MATERIAL SAFETY DATA SHEET
THERMOGUARD® ANTIFREEZE/COOLANT

FOR CHEMICAL EMERGENCY SPILLS OR LEAKS
CALL 800-424-9300 24 HOURS ADAY

HAZARD RATING

- **Health: 3** **0=Least to 4= Extreme**
- **Reactivity: 0**
- **Fire: 1**

I. IDENTIFICATION

Product Name:	Antifreeze/Coolant
Chemical Name:	Antifreeze
Formula:	Concentrate pre-charged & 50/50 prediluted
Synonyms:	THERMOGUARD® Antifreeze
DOT shipping class:	Non regulated
Chemical Family:	Glycol
UN NO:	N/A

II. HAZARDOUS COMPONENTS

COMPONENT	CAS	TLV
Ethylene Glycol	107-21-1	50 ppm CEILING

III. PHYSICAL DATA

Boiling Point:	ND
Freeze Point:	ND
Specific Gravity:	APP1.11
Solubility in water:	Soluble
Appearance & Odor:	Green liquid with mild odor

This material safety data sheet is based on information provided us and the contents are believed to be accurate,. Although no guarantee or warranty I provided or implied by the company in this respect.

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method):	>200oF
Extinguishing Media:	water Fog, Alcohol Foam, Carbon Dioxide and Dry Chemical. Do not use a direct spray of water
Fire Fighting Procedures:	Get people out of the area. Do not enter the fire area without full bunker equipment including NIOSH approved pressure supplied masks.
Unusual Fire Hazards:	Containers may explode from internal pressure if confined to fire. Cool with water. Keep unnecessary people away.

V. REACTIVITY DATA

Chemical Stability:	Stable
Incompatible materials:	Oxidizing agents, reducing agents and strong acids
Decomposition Products:	From fire – oxides of carbon and nitrogen
Hazardous polymerization:	Will not occur

VI. HEALTH HAZARD DATA

Routes of Entry	Inhalation – Primary Skin/Eyes – Primary Ingestion – Not likely to occur
Health Hazards	
Acute:	Prolonged exposure can be destructive to tissue especially eye tissue. Inhalation of vapors or mist may cause mucous membrane irritation. Ingestion can result in central nervous system depression, kidney injury and destruction of tissue, all of which could be fatal.
Chronic:	Over exposure to vapors are associated with injuries to kidneys, liver, lungs, blood and central nervous system. Skin absorption can induce central nervous system depression and kidney and liver injury. Repeated ingestion can cause brain damage and destruction of tissue. Ethylene Glycol had caused birth defects or deaths in laboratory studies using pregnant mice and rats.

CARCINOGENICITY

Listed in NTP? No IARC Monographs? No OSHA Regulated? No

Signs & Symptoms of Exposure	
Inhalation:	Drunkenness, nausea, vomiting, visual impairment, rapid breathing, increased heart rate and decreased urine volume.
Eyes:	Irritation/Tissue destruction develops immediately upon contact.
	Medical conditions generally aggravated by exposure are breathing disorders, dermatitis and eye, kidney, liver disorders.
First Aid Procedures:	
Eye Contact:	Flush with water for 15 minutes
Skin Contact:	wash skin with soap and water. Get medical attention if symptoms develop and persist
Ingestion:	Do not induce vomiting. Drink large amounts of water to dilute material in stomach. Follow with milk. Never give fluids if the victim is unconscious or having convulsions. GET MEDICAL ATTENTION IMMEDIATELY. Material can be fatal.
Inhalation:	Remove victim to fresh air and if needed immediately begin artificial respiration. Give oxygen if breathing is labored. Get emergency Medical help. Contact Physician immediately.

VII. SPILL OR LEAK PROCEDURE.

For Spill:	In case of spillage absorb with inert material and dispose of in accordance with applicable regulations.
For Waste Disposal:	EPA approved hazardous waste disposal site.

VIII. PRECAUTIONS FOR SAFE HANDLING AND USE:

Respiratory Protection:	NIOSH approved organic vapor mask required in closed areas
Ventilation:	Required in closed areas
Protective Gloves:	NIOSH Chemical resistant gloves suitable for Ethylene Glycol
Other Protective Equipment:	Chemical apron is recommended if there is a likelihood of splashing of liquid onto the body.

VX. TRANSPORTATION INFORMATION:

Hazard Class:	Not regulated
DOT Shipping Name:	Ethylene Glycol Antifreeze
UN/NA Number:	None
Reportable Quantity:	None

X. OTHER DATA

EPA hazard categories:	Acute, chronic
Cercla RQ:	1 Pound based on Ethylene Glycol
SARA TITLE III:	RQ – None; TPQ – None
SARA TITLE III,Section 313:	Component – Ethylene Glycol. CAS – 107-21-1 % 94-98%

Footnotes:	N/A – Not Applicable	N/D – No Data
	App. – Approximate	EST. – Estimated
	< - Less Than	> - Greater Than

MEDIUM STRENGTH THREADLOCKER 80-161

HMIS RATING	
Health	2
Flammability	1
Reactivity	1

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	2
Flammability	1
Reactivity	1
NFPA 30B LEVEL	
N/A	

KIMBALL-MIDWEST
P.O. BOX 2470
COLUMBUS, OH 43216-2470
CORPORATE TELEPHONE: 614-219-6100
EMERGENCY TELEPHONE: 800-424-9300

1. PRODUCT IDENTIFICATION

PART NUMBER.....80-161
PRODUCT NAME.....Medium Strength Threadlocker, 10 ml Bottle
CHEMICAL FAMILY.....N/A
DOT SHIPPING.....Unrestricted

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	REL	ACGIH TLV	%
Polyglycol dimethacrylate (25852-47-5)	-	-	-	60-100
Polyglycol oleate (9004-96-0)	-	-	-	10-30
Saccharin (81-07-2)	-	-	-	1-5
Silica, amorphous, fumed, crystalline free (112945-52-5)	6 mg/m^3	10 mg/m^3	-	1-5
*Cumene Hydroperoxide (80-15-9)	-	-	-	1-5
Propylene glycol (57-55-6)	-	-	-	1-5
Titanium dioxide (13463-67-7)	15 mg/m3	10 mg/m3	-	0.1-1

All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement. **Ceiling

3. PHYSICAL DATA

BOILING POINT (RANGE).....>300°F
VAPOR PRESSURE PSIG @ 70°F.....<5
VAPOR DENSITY (AIR = 1).....Not available
SOLUBILITY IN WATER.....Slight
SPECIFIC GRAVITY (H2O = 1).....1.10
MELTING/FREEZING POINT.....N/A
EVAPORATION RATE (61%=1).....N/A
VOC content (by weight).....4.48%; 49.3 g/L (EPA Method 24)
APPEARANCE AND ODOR.....Blue liquid/mild odor

4. FIRE AND EXPLOSION DATA

FLASH POINT.....>200°F TCC
UPPER EXPLOSIVE LIMIT (%).....12.5
LOWER EXPLOSIVE LIMIT (%).....2.6
EXTINGUISHING MEDIA.....Dry Chemical, Foam, CO2
SPECIAL FIREFIGHTING PROCEDURES.....None
FIRE AND EXPLOSION HAZARDS.....None
HAZARDOUS COMBUSTION PRODUCTS.....Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY.....Skin absorption, Inhalation, Ingestion, Eye contact,
HEALTH HAZARDS (ACUTE AND CHRONIC).....Causes eye irritation. May cause skin irritation. May cause allergic skin reaction. May cause respiratory tract irritation.
LITERATURE REFERENCED TARGET ORGAN HEALTH EFFECTS.....Polyglycol dimethacrylate: Allergen, Irritant;Polyglycol oleate:Irritant; Saccharin: No Target Organs: Silica: Nuisance dust; Cumene hydroperoxide: Allergen irritant, corrosive, mutagen, and effects on the central nervous system, Propylene Glycol: Irritant.

POTENTIAL HEALTH EFFECTS
INHALATION.....May cause respiratory tract irritation.
SKIN CONTACT.....May cause allergic skin reaction.
EYE CONTACT.....Contact with eyes will cause irritation.
INGESTION.....Not expected to be harmful by ingestion.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.....Eye, Skin and Respiratory disorders.

5. HEALTH EFFECTS DATA CON'T.

FIRST AID PROCEDURES

EYE CONTACT.....Flush with copious amounts of lukewarm water for 15 minutes, holding eyelids open all the time.
SKIN CONTACT.....Wash with soap and large volumes of water. Remove contaminated clothing, wash before reuse. Obtain medical attention if symptoms persist.
INGESTION.....Do not induce vomiting, keep individual calm and seek medical attention.
INHALATION.....Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention in case of complaints.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines).....This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm.

6. REACTIVITY

STABILITY.....Stable
INCOMPATIBILITIES.....Strong oxidizers, Free radical initiators. Strong reducing agents. Alkalis. Oxygen scavengers. Other polymerization initiators. Copper. Iron. Zinc. Aluminium. Rust.
HAZARDOUS DECOMPOSITION PRODUCTS.....Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.
HAZARDOUS POLYMERIZATION.....Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS.....None known.

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS.....Safety glasses with side shields, neoprene, rubber, or butyl gloves; ventilation sufficient to maintain vapor concentrations below TLV.
WASH REQUIREMENTS.....Wash with soap and water.
SPILL OR LEAK PROCEDURES.....Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS.....Dispose of in accordance with local, state, and federal regulations.
HANDLING & STORAGE.....Wash thoroughly after handling. Keep away from heat, sparks, and flames. Store below 100°F.
OTHER PRECAUTIONS.....Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors; protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCTS. SUCH INFORMATION IS BASED UPON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND IS BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

KIMBALL MIDWEST
Specializing in Materials Management since 1923

ULTRA PRO•MAX GLOSS YELLOW PAINT 80-888

HMIS RATING	
Health	1
Flammability	4
Reactivity	3

MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	1
Flammability	4
Reactivity	3
NFPA 30B LEVEL	
3	

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1. PRODUCT IDENTIFICATION

PART NUMBER..... 80-888
PRODUCT NAME..... ULTRA PRO• MAX GLOSS YELLOW PAINT 16OZ AEROSOL CAN
CHEMICAL FAMILY..... N/A
DOT SHIPPING..... Consumer Commodity ORM-D

2. HAZARDOUS INGREDIENTS

SPECIFIC CHEMICAL IDENTITY, COMMON NAMES	OSHA PEL	ACGIH TLV	REL	%
Acetone (00067-64-1)	1000ppm	250ppm	750ppm	19.17
Propane (00074-98-6)	1000ppm	1000ppm	2500ppm	15.71
N-Butane (00106-97-8)	-	800ppm	800ppm	9.22
Barium Sulphate, natural (07727-43-7)	5mg/m^3	5mg/m^3	10mg/m^3	8.09
Glycol Ether EP (02807-30-9)	-	-	-	5.18
*Methyl Iso-butyl Ketone (00108-10-1)	100ppm	75ppm	75ppm	5.06
Titanium Dioxide (13463-67-7)	-	-	-	3.79
Methyl Propyl Ketone (00107-87-9)	200ppm	150ppm	250ppm	3.28
Isobutyl acetate (00100-41-4)	150ppm	150ppm	150ppm	2.59
*Xylene (01330-20-7)	100ppm	150ppm	150ppm	2.44
PM acetate (108-65-6)	-	-	-	2.23
Novaperm Yellow Pigment (82199-12-0)	-	-	-	1.21

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3. PHYSICAL DATA

BOILING POINT (RANGE)..... -44°C (-47°F)
VAPOR PRESSURE PSIG @ 70°F..... 2750 hPa
VAPOR DENSITY (AIR = 1)..... N/A
SOLUBILITY IN WATER..... Slight
SPECIFIC GRAVITY (H2O = 1)..... Between 0.77 and 0.85
MELTING/FREEZING POINT..... N/A
EVAPORATION RATE (Ether=1)..... >1
VOC content (by weight)..... 46.5%, 493.7g/L
APPEARANCE AND ODOR..... Yellow liquid/Aromatic

4. FIRE AND EXPLOSION DATA

FLASH POINT..... -19°C (-2°F)
UPPER EXPLOSIVE LIMIT (%)..... 10.9%
LOWER EXPLOSIVE LIMIT (%)..... 1.7%
EXTINGUISHING MEDIA..... Extinguishing powder, CO_2, Sand. Fight larger fires with water spray or alcohol resistant foam.
SPECIAL FIREFIGHTING PROCEDURES Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.
FIRE AND EXPLOSION HAZARDS..... Vapors may form explosive mixture with air.
NFPA Flammability Hazard..... 4

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY Skin contact Skin absorption, In

HEALTH HAZARDS (ACUTE AND CHRONIC) Extremely flammabl

system. Vapors may cause drowsiness and dizziness. May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE Heart disease, respiratory disorders.

5. HEALTH EFFECTS DATA CON'T

FIRST AID PROCEDURES

EYE CONTACT..... Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT..... Wash with soap and water. Get medical attention if irritation develops or persists.
INGESTION..... If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
INHALATION..... Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Rescuers should put on appropriate protective gear. Keep victim warm. Get immediate medical attention.

SPECIAL HEALTH EFFECTS

CARCINOGEN (OSHA Guidelines)..... This product contains a chemical known to the State of California to cause cancer.

6. REACTIVITY

STABILITY..... Stable under normal conditions.
INCOMPATIBILITIES..... No information.
HAZARDOUS DECOMPOSITION..... No decomposition if used according to specifications.
PRODUCTS..... Fumes may contain CO_2, CO.
HAZARDOUS POLYMERIZATION..... Will not occur under normal conditions.
HAZARDOUS POLYMERIZATION CONDITIONS..... None known.

7. PRECAUTIONS FOR SAFE HANDLING & USE

PROTECTIVE EQUIPMENT REQUIREMENTS..... Safety goggles. Local exhaust ventilation may be necessary to control air contaminants to within TLVs during the use of this product.
WASH REQUIREMENTS..... Wash with soap and water.
SPILL OR LEAK PROCEDURES..... Absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container.
WASTE DISPOSAL METHODS..... Dispose of in accordance with local, state, and federal regulations.
HANDLING & STORAGE..... Wash thoroughly after handling. Keep away from heat, sparks, and flames. Store below 120°F.
OTHER PRECAUTIONS..... Use NIOSH approved respirator with an organic vapor cartridge; avoid prolonged breathing of vapors; protection provided by air purifying respirators is limited.

8. ADDITIONAL INFORMATION

Use self-contained breathing apparatus if TLV limits are exceeded. Do not eat or smoke while using. Wash hands after use. Use positive pressure air supplied respirator if there is potential for uncontrolled release, if exposure levels are unknown, or in any circumstance where air purifying respirators may not provide adequate protection.

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